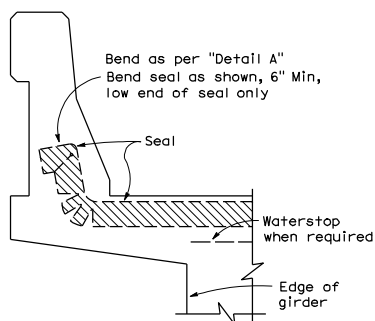
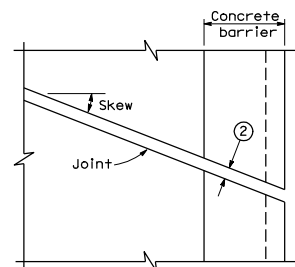
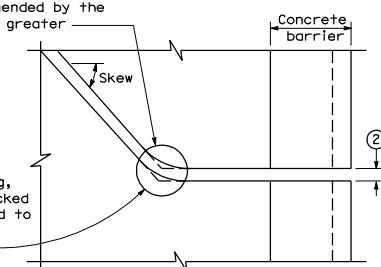
**NOTE:**

Type "B" seal shown. Type "A" seals to conform to the general path of seal shown, cuts for bending not required. Bend Type "A" seals 3" up into curb or barrier rail on only the low end of the seal.

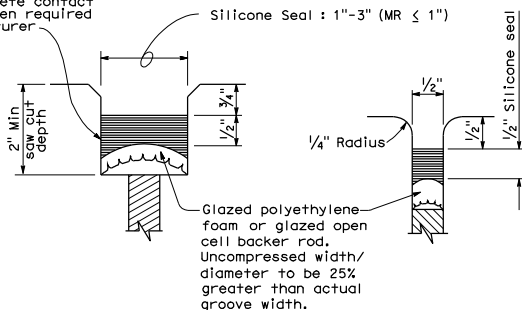
CONCRETE BARRIER AND SIDEWALK**CONCRETE BARRIER****JOINT SEALS DETAILS****PLAN OF JOINT (SKEW $\leq 20^\circ$)**

Min $\frac{1}{4}$ radius to be 4 times uncompressed width of seal or as recommended by the manufacturer, whichever is greater

In lieu of saw cutting, this area may be blocked out and reconstructed to match saw cutting on both sides.

**PLAN OF JOINT (SKEW $> 20^\circ$)**

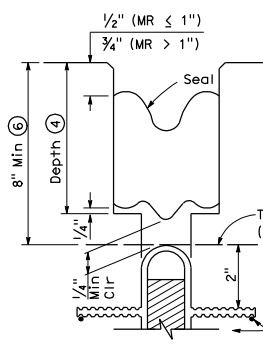
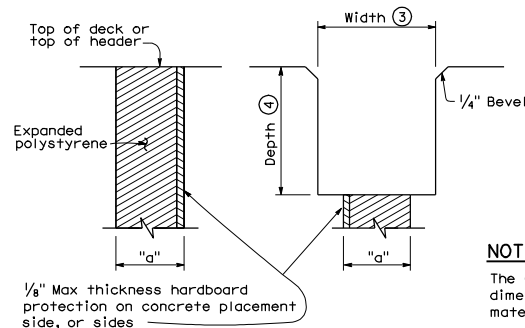
Prime concrete contact surfaces when required by manufacturer

**TYPE A SEAL**

Movement rating : Silicone = 1" Max

TYPE AL SEAL

Longitudinal joints only

**TYPE B JOINT SEAL
IN MINIMUM WIDTH POSITION (W₂)****FORMING DETAIL SAWCUT DETAIL****NOTES:**

- Make smooth cuts from the bottom of seal to $1\frac{1}{2}$ " clear of top leaving at least one complete cell between the top of the cut and top of the seal. When necessary cut back of seal to clear conduit and round openings.
- Opening in barrier to match width of sawn deck joint.
- Sawcut groove widths shall be as ordered by the Engineer.
- Depth of sawcut: Type A - Depth to be 2" minimum. Type B - Depth to be equal to or greater than the depth of seal measured along the contact surface, when compressed to minimum width position (W₂) plus dimensions shown.
- MR (movement rating) as shown on other plan sheets.
- Other depths must be approved by the Engineer.

DIMENSIONS "a" OF JOINT REQUIRED

Movement Rating (MR) ⑤	Bridge Type	"a" Dimension Deck Concrete Placed		
		Winter	Fall-Spring	Summer
2"	All except CIP/PS	1 1/2"	1 1/4"	3/4"
	CIP/PS	1 1/4"	1"	1/2"
1 1/2"	All except CIP/PS	1 1/4"	1"	1/2"
	CIP/PS	1"	3/4"	1/2"
1"	All except CIP/PS	1"	3/4"	1/2"
	CIP/PS	3/4"	1/2"	1/2"
1/2"	All except CIP/PS	3/4"	3/4"	1/2"
	CIP/PS	1/2"	1/2"	1/2"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**JOINT SEALS
(MAXIMUM MOVEMENT
RATING = 2")**

NO SCALE

TYPE B SEAL

Movement Rating ≤ 2 "

RSP B6-21 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B6-21
DATED MAY 1, 2006 - PAGE 258 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B6-21

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

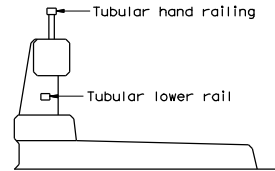
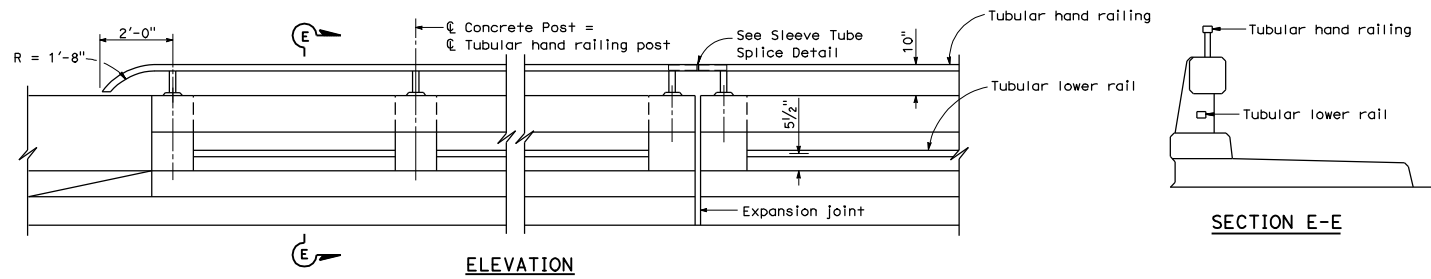
REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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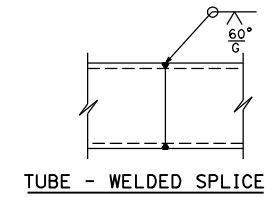
REGISTERED PROFESSIONAL ENGINEER
Tillot Satter
No. C42892
Exp. 03-31-08
CIVIL
STATE OF CALIFORNIA

To accompany plans dated _____

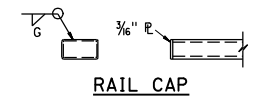


SECTION E-E

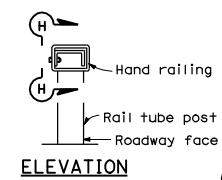
ELEVATION



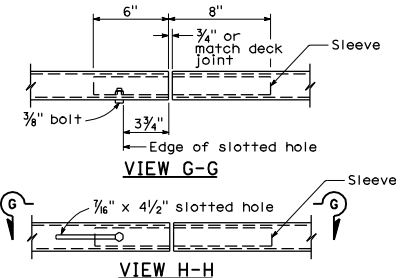
TUBE - WELDED SPLICE



RAIL CAP



ELEVATION



VIEW G-G

VIEW H-H

SLEEVE TUBE SPLICE DETAIL

Tack weld 3/8" nut inside of sleeve for 3/8" Hex bolt with lock washer, See Note 6

1/2" holes near and far side of sleeve formed of 3/8" bent thus, for sliding fit inside of rail tube

NOTES:

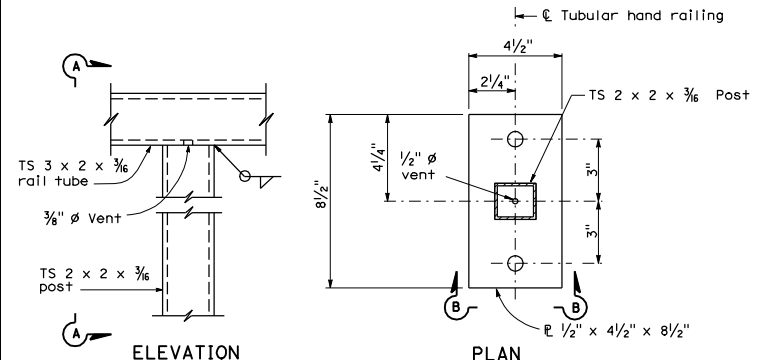
1. Galvanize rail assembly after fabrication.
2. Posts shall be normal to railing.
3. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length accordingly.
4. Top rail tube shall be continuous over not less than two posts except a short length is permitted near deck or wall joints, electroliers, or other rail discontinuities.
5. See project plans for limits of Tubular Hand railing.
6. 3/8" nut tack welded to sleeve may be replaced by drilled and tapped hole in sleeve.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CONCRETE BARRIER
TYPE 80SW
(SHEET 3 OF 3)**

NO SCALE

See Section C-C for details not shown RSP B11-64 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B11-64 DATED MAY 1, 2006 - PAGE 280 OF THE STANDARD PLANS BOOK DATED MAY 2006.

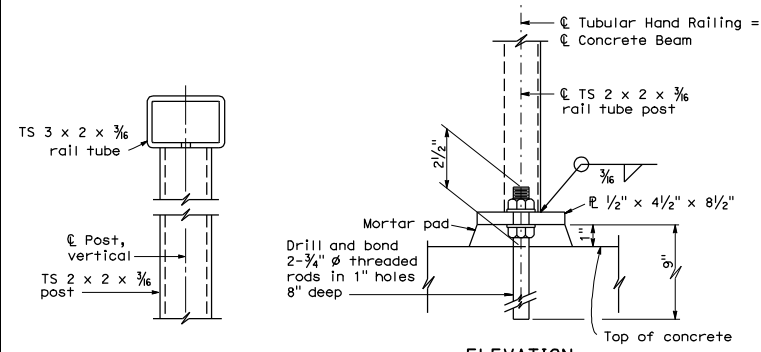
REVISED STANDARD PLAN RSP B11-64



ELEVATION

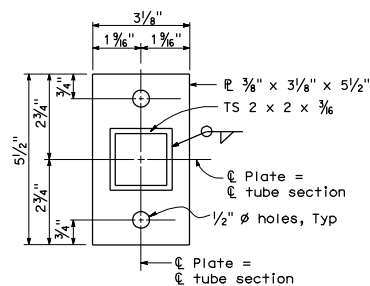
PLAN

This plate detail is restricted to Tubular hand railing (TS 2 x 2 x 3/16 post)

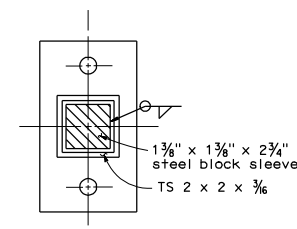


ELEVATION

SECTION B-B



SECTION C-C



SECTION D-D

TUBULAR RAILING CONNECTION DETAILS

SECTION A-A

2006 REVISED STANDARD PLAN RSP B11-64

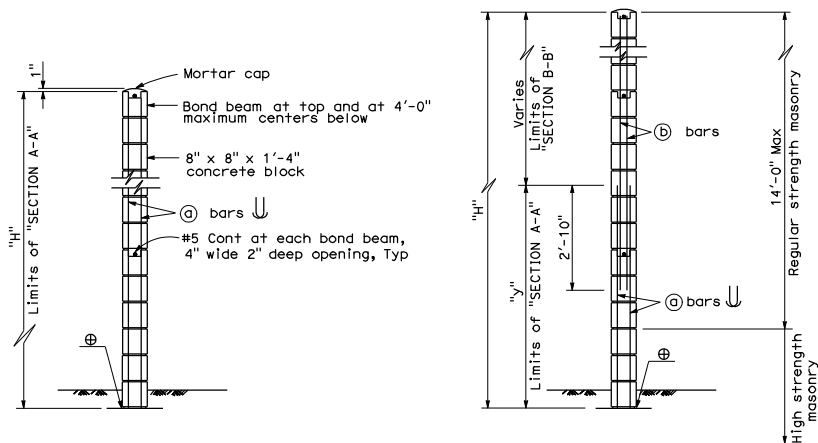
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Douglas J. Durand
REGISTERED CIVIL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Douglas J. Durand
No. C47240
Exp. 12-31-07
CIVIL
STATE OF CALIFORNIA



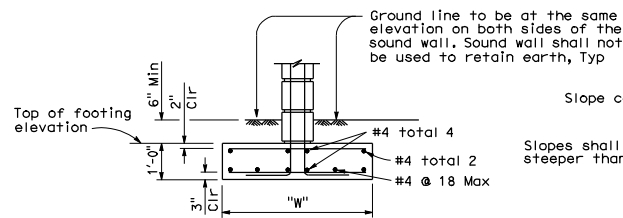
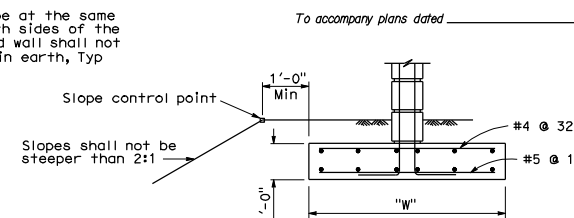
H=6'-0" THRU H=10'-0"

H=12'-0" THRU H=16'-0"

For details not shown, see H=6'-0" thru H=10'-0".

TYPICAL SECTION

⊕ Full mortar bed at bottom of wall

**CASE 1**For details not shown, see Case 2.
Level ground (±10%) on both sides of the sound wall.**CASE 2**For details not shown, see Case 1.
Level ground (±10%) on the traffic side of the sound wall and sloping ground on the opposite side.**SPREAD FOOTING SECTION****TRENCH FOOTING**

Maximum H	CASE 1			CASE 2			Maximum H
	φ = 25 Min	φ = 30 Min	φ = 35 Min	φ = 30 Min	φ = 35 Min	φ = 35 Min	
6'-0"	5'-0"	4'-3"	3'-6"	6'-6"	5'-0"	6'-0"	6'-0"
8'-0"	6'-0"	5'-0"	4'-3"	7'-9"	6'-0"	8'-0"	8'-0"
10'-0"	6'-9"	5'-9"	5'-0"	8'-9"	6'-9"	10'-0"	10'-0"
12'-0"	7'-9"	6'-6"	5'-6"	9'-9"	7'-9"	12'-0"	12'-0"
14'-0"	8'-6"	7'-3"	6'-0"	10'-9"	8'-6"	14'-0"	14'-0"
16'-0"	9'-3"	7'-9"	6'-6"	11'-9"	9'-3"	16'-0"	16'-0"

Case 1 - Level ground (±10%) on both sides of the sound wall.

Case 2 - Level ground (±10%) on traffic side of the sound wall and sloping ground on opposite side.

SOUND WALL REINFORCEMENT TABLE

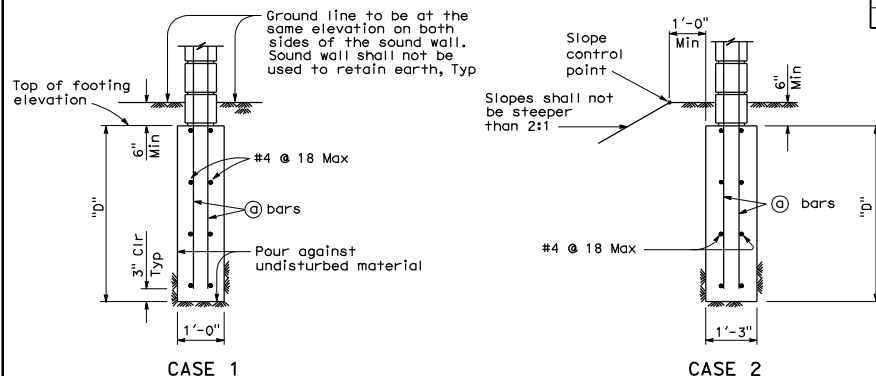
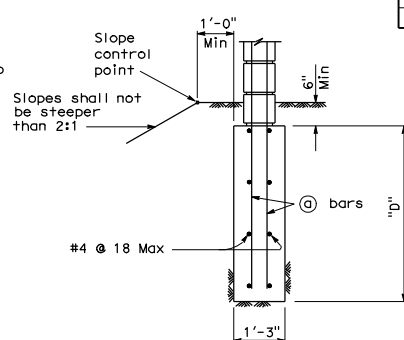
Maximum H	Ⓐ bars @ 1'-4" Max	Ⓑ bars @ 1'-4" Max	"y"	f'm (psi)	Compressive Strength of CMU (psi)	Maximum H
6'-0"	#4	—	—	1500	1900	6'-0"
8'-0"	#4	—	—	1500	1900	8'-0"
10'-0"	#4	—	—	1500	1900	10'-0"
12'-0"	#5	#4	6'-0"	1500	1900	12'-0"
14'-0"	#6	#4	8'-0"	1500	1900	14'-0"
16'-0"	#6	#4	10'-0"	2000	2800	16'-0"

GENERAL NOTES:

- For type of block and joint finish, see other sheets.
- When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-9 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond and beams.
- Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- For intermediate wall heights that are between the "H's" given, use the tabular information for the next higher "H".
- Masonry strengths are listed in the "SOUND WALL REINFORCEMENT TABLE".

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION**SOUND WALL
MASONRY BLOCK ON FOOTING
DETAILS (1)**

NO SCALE

RSP B15-1 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-1
DATED MAY 1, 2006 - PAGE 291 OF THE STANDARD PLANS BOOK DATED MAY 2006.**REVISED STANDARD PLAN RSP B15-1****CASE 1**For details not shown, see Case 2.
Level ground (±10%) on both sides of the sound wall.**CASE 2**For details not shown, see Case 1.
Level ground (±10%) on one side of the sound wall and sloping ground on the opposite side.**TRENCH FOOTING SECTION****SPREAD FOOTING**

Maximum H	W
6'-0"	3'-0"
8'-0"	4'-0"
10'-0"	5'-0"
12'-0"	5'-9"
14'-0"	6'-6"
16'-0"	7'-6"

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Douglas J. Durand
 REGISTERED CIVIL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 No. C47240
 Exp. 12-31-07
 CIVIL
 STATE OF CALIFORNIA

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To accompany plans dated _____

GENERAL NOTES:

- For type of block and joint finish, see other sheets.
- When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-9 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- For intermediate wall heights that are between the "H's" given, use the tabular information for the next higher "H".
- Masonry strengths are listed in the "SOUND WALL REINFORCEMENT TABLE". See Standard Plan B15-3.

DESIGN NOTES:

DESIGN

Uniform Building Code, 1997 Edition
and the Bridge Design Specifications.

DESIGN WIND LOAD

20 psf

DESIGN SEISMIC LOAD

0.57 Dead load

REINFORCED CONCRETE

$f'_c = 3.6 \text{ ksi}$
 $f_y = 60 \text{ ksi}$

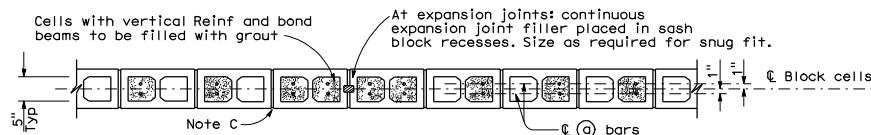
CONCRETE MASONRY

REGULAR STRENGTH

$f'_m = 1500 \text{ psi}$
 $f_b = 495 \text{ psi}$
 $f_s = 24,000 \text{ psi}$
 $n = 25.8$

HIGH STRENGTH

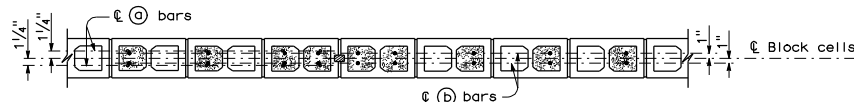
$f'_m = 2000 \text{ psi}$ $f'_m = 2500 \text{ psi}$
 $f_b = 660 \text{ psi}$ $f_b = 830 \text{ psi}$
 $f_s = 24,000 \text{ psi}$ $f_s = 24,000 \text{ psi}$
 $n = 19.3$ $n = 15.5$



SECTION A-A

For details not shown, see other sections.

H=6'-0" THRU H=10'-0"



SECTION A-A

SECTION B-B

For details not shown, see other sections.

H=12'-0" THRU H=16'-0"

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SOUND WALL MASONRY BLOCK ON PILE CAP DETAILS (2)

NO SCALE

RSP B15-4 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-4
DATED MAY 1, 2006 - PAGE 294 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B15-4

2006 REVISED STANDARD PLAN RSP B15-4

DIST

COUNTY

ROUTE

POST MILES
TOTAL PROJECT

SHEET
NO.

TOTAL
SHEETS

Douglas J. Durandal

REGISTERED CIVIL ENGINEER

October 5, 2007

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER

Douglas J. Durandal

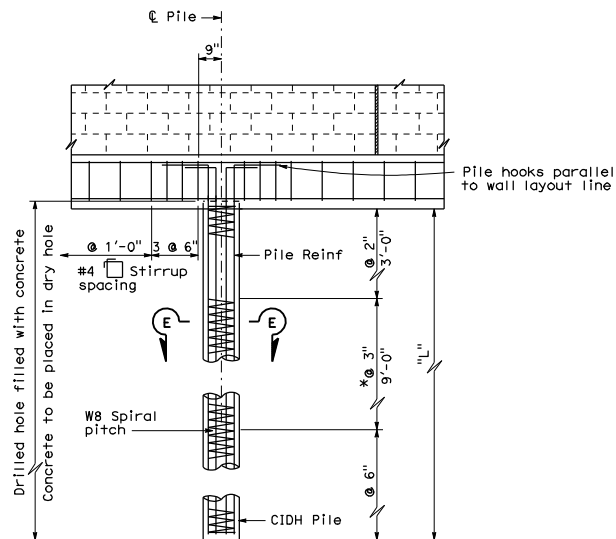
No. C47240

Exp. 12-31-07

CIVIL

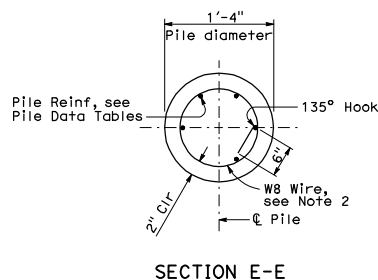
STATE OF CALIFORNIA

To accompany plans dated _____

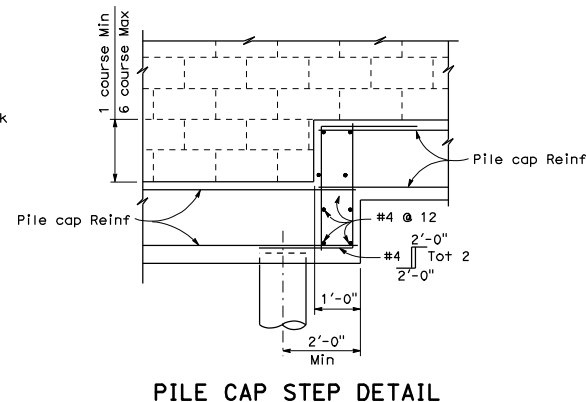


DETAIL D

* @ 2" at option of Contractor



SECTION E-E



PILE CAP STEP DETAIL

NOTES:

- For details not shown, see Standard Plan B15-3 and Revised Standard Plan RSP B15-4.
- Lapped splices in spiral reinforcement shall be lapped at least 80 wire diameters. Spiral reinforcement at splices and at ends shall be terminated with a 135° hook with a 6" tail hooked around a longitudinal bar.

CASE 1 - PILE DATA TABLE										
Maximum H	ø = 25 Min			ø = 30 Min			ø = 35 Min			Maximum H
	S	L	Pile Reinf	S	L	Pile Reinf	S	L	Pile Reinf	
6'-0"	16'-0"	7'-0"	#6 Tot 6	16'-0"	5'-6"	#6 Tot 6	16'-0"	4'-6"	#6 Tot 6	6'-0"
8'-0"	16'-0"	8'-6"	#6 Tot 7	16'-0"	7'-0"	#6 Tot 7	16'-0"	5'-6"	#6 Tot 7	8'-0"
10'-0"	16'-0"	10'-0"	#7 Tot 6	16'-0"	8'-0"	#7 Tot 6	16'-0"	6'-6"	#7 Tot 6	10'-0"
12'-0"	15'-0"	11'-6"	#8 Tot 7	16'-0"	9'-6"	#8 Tot 7	16'-0"	7'-6"	#8 Tot 7	12'-0"
14'-0"	13'-0"	11'-6"	#8 Tot 7	14'-0"	10'-0"	#8 Tot 7	14'-0"	8'-0"	#8 Tot 7	14'-0"
16'-0"	12'-0"	12'-0"	#8 Tot 7	13'-0"	10'-6"	#8 Tot 7	13'-0"	8'-6"	#8 Tot 7	16'-0"

Case 1 - Level ground (±10%) on both sides of the sound wall.

CASE 2 - PILE DATA TABLE							
Maximum H	ø = 30 Min			ø = 35 Min			Maximum H
	S	L	Pile Reinf	S	L	Pile Reinf	
6'-0"	16'-0"	11'-6"	#8 Tot 7	16'-0"	8'-6"	#6 Tot 7	6'-0"
8'-0"	16'-0"	14'-0"	#8 Tot 7	16'-0"	10'-6"	#7 Tot 6	8'-0"
10'-0"	15'-0"	16'-0"	#8 Tot 7	16'-0"	12'-0"	#7 Tot 7	10'-0"
12'-0"	12'-0"	16'-0"	#8 Tot 7	15'-0"	13'-6"	#8 Tot 7	12'-0"
14'-0"	10'-0"	16'-0"	#8 Tot 7	12'-0"	13'-6"	#8 Tot 7	14'-0"
16'-0"	8'-0"	16'-0"	#8 Tot 7	11'-0"	14'-0"	#8 Tot 7	16'-0"

Case 2 - Level ground (±10%) on traffic side of the sound wall and sloping ground on opposite side.

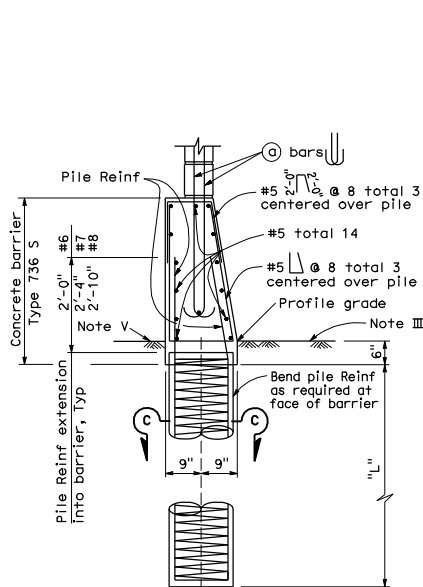
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**SOUND WALL
MASONRY BLOCK ON PILE CAP
DETAILS (3)**

NO SCALE

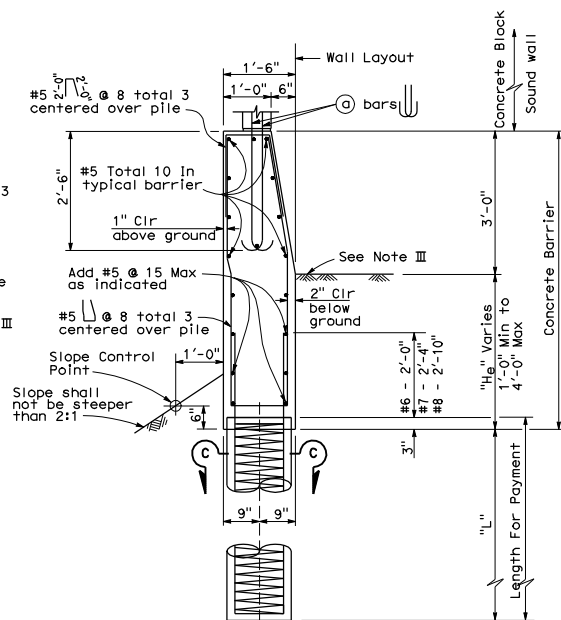
RSP B15-5 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-5
DATED MAY 1, 2006 - PAGE 295 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B15-5



CASE 1

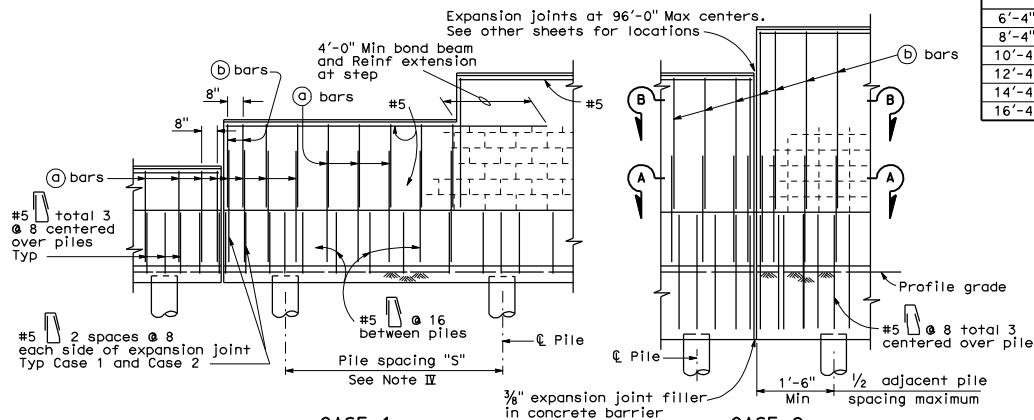
For details not shown, See Case 2.
Level ground $\pm 10\%$ on both sides of barrier.



CASE 2

For details not shown, See Case 1.
Level ground $\pm 10\%$ at the traffic side of barrier and sloping ground on the opposite side.

BARRIER SECTIONS



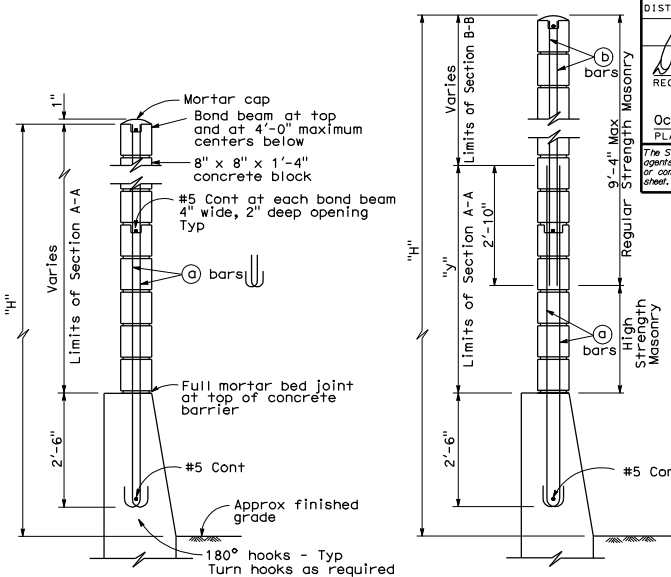
CASE 1

For details not shown, See Case 2.

CASE 2

For details not shown, See Case 1.

PARTIAL ELEVATIONS



H=6'-4" THRU H=10'-4"

H=12'-4" THRU H=16'-4"

For details not shown, see H=6'-4" thru H=10'-4".

TYPICAL SECTIONS

See Revised Standard Plan RSP B15-8 for pile details.

SOUND WALL REINFORCEMENT TABLE

Maximum H	(a) bars @ 1'-4" Max	(b) bars @ 1'-4" Max	"y"	f'm (psi)	Compressive Strength of CMU (psi)	H
6'-4"	#4	---	---	1500	1900	6'-4"
8'-4"	#4	---	---	1500	1900	8'-4"
10'-4"	#4	---	---	1500	1900	10'-4"
12'-4"	#5	#4	5'-0"	1500	1900	12'-4"
14'-4"	#6	#4	7'-0"	1500	1900	14'-4"
16'-4"	#6	#4	9'-0"	2500	3750	16'-4"

NOTES I THROUGH VI:

- Details shown are primarily to conform design of sound walls to Type 736S and Type 736 SV Concrete Barriers. For sound wall details conforming with barriers see Standard Plan B15-7 and Revised Standard Plan RSP B15-8.
- For details and sections not shown, see Standard Plan B15-7 and Revised Standard Plan RSP B15-8.
- Slope ground at traffic side of barrier to drain. Maximum slope $\pm 10\%$. See Std Plan B11-56, Note D.
- Pile spacing may be varied, but shall not exceed the tabular values. See Revised Standard Plan RSP B15-8.
- For Case 1 - ground line to be at the same elevation on both sides of the barrier. Barrier shall not be used to retain earth.
- See Standard Plan B15-9 for other details.

NOTES A THROUGH G:

- For type of block, type of block bond, and joint finish, see other sheets.
- When blocks are laid in stacked bond, ladder type, galvanized joint reinforcement shall be provided. A minimum of 2-9 gauge wires continuous at 4'-0" maximum to be used. Locate reinforcement in joints that are at the approximate midpoint between bond beams.
- Horizontal joints shall be tooled concave or may be weathered. Vertical joints shall be tooled concave or may be raked.
- For intermediate wall heights (H), or barrier depths (H_B), that are between the values given, use the tabular information for the next higher (H) or (H_B).
- Class 2 concrete to be used for the barrier.
- Masonry strengths are listed in the "SOUND WALL REINFORCEMENT TABLE".

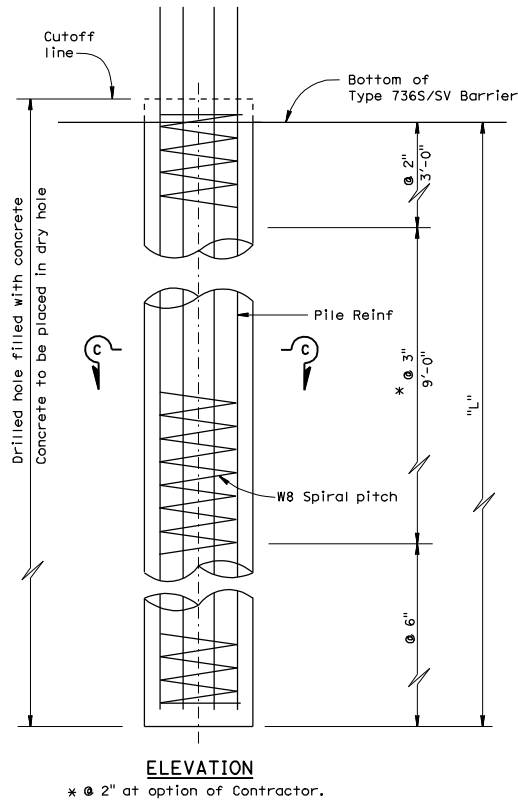
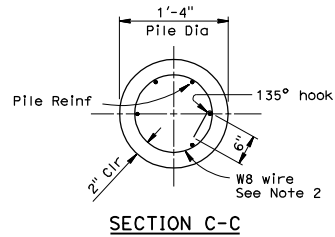
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

SOUND WALL MASONRY BLOCK ON TYPE 736S/ SV BARRIER DETAILS (1)

NO SCALE

RSP B15-6 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-6
DATED MAY 1, 2006 - PAGE 296 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B15-6



* @ 2" at option of Contractor.

CASE 1: PILE DATA TABLE										
Maximum H	$\phi = 25$ Min			$\phi = 30$ Min			$\phi = 35$ Min			Maximum H
	S	L	Pile Reinf	S	L	Pile Reinf	S	L	Pile Reinf	
6'-4"	10'-0"	8'-6"	#6 Tol 6	10'-0"	7'-0"	#6 Tol 6	10'-0"	6'-0"	#6 Tol 6	6'-4"
8'-4"	10'-0"	9'-6"	#6 Tol 6	10'-0"	8'-0"	#6 Tol 6	10'-0"	7'-0"	#6 Tol 6	8'-4"
10'-4"	10'-0"	10'-6"	#6 Tol 6	10'-0"	9'-0"	#6 Tol 6	10'-0"	7'-6"	#6 Tol 6	10'-4"
12'-4"	10'-0"	11'-6"	#7 Tol 6	10'-0"	9'-6"	#7 Tol 6	10'-0"	8'-6"	#6 Tol 6	12'-4"
14'-4"	10'-0"	12'-6"	#7 Tol 7	10'-0"	10'-6"	#7 Tol 7	10'-0"	9'-0"	#7 Tol 7	14'-4"
16'-4"	10'-0"	13'-0"	#8 Tol 7	10'-0"	11'-6"	#8 Tol 7	10'-0"	9'-6"	#7 Tol 7	16'-4"

CASE 2: PILE DATA TABLE								
H_e	Maximum H	$\phi = 30$ Min			$\phi = 35$ Min			Maximum H
		S	L	Pile Reinf	S	L	Pile Reinf	
1'-0"	6'-4"	10'-0"	15'-0"	#7 Tol 6	10'-0"	12'-0"	#6 Tol 6	6'-4"
	8'-4"	9'-9"	16'-0"	#7 Tol 6	10'-0"	13'-0"	#7 Tol 6	8'-4"
	10'-4"	8'-0"	16'-0"	#7 Tol 6	10'-0"	14'-0"	#7 Tol 6	10'-4"
	12'-4"	6'-9"	16'-0"	#7 Tol 6	10'-0"	15'-0"	#8 Tol 7	12'-4"
	14'-4"	5'-9"	16'-0"	#7 Tol 6	9'-6"	15'-6"	#8 Tol 7	14'-4"
2'-0"	16'-4"	5'-0"	16'-0"	#7 Tol 6	8'-9"	16'-0"	#8 Tol 7	16'-4"
	6'-4"	8'-3"	16'-0"	#7 Tol 6	10'-0"	13'-6"	#7 Tol 6	6'-4"
	8'-4"	7'-0"	16'-0"	#7 Tol 6	10'-0"	14'-6"	#7 Tol 7	8'-4"
	10'-4"	6'-0"	16'-0"	#7 Tol 6	10'-0"	15'-3"	#8 Tol 7	10'-4"
	12'-4"	5'-3"	16'-0"	#7 Tol 6	9'-9"	16'-0"	#8 Tol 7	12'-4"
3'-0"	14'-4"	4'-6"	16'-0"	#7 Tol 6	8'-4"	16'-0"	#8 Tol 7	14'-4"
	16'-4"	4'-0"	16'-0"	#7 Tol 6	7'-4"	16'-0"	#8 Tol 7	16'-4"
	6'-4"	6'-0"	16'-0"	#7 Tol 6	10'-0"	15'-3"	#8 Tol 7	6'-4"
	8'-4"	5'-3"	16'-0"	#7 Tol 6	10'-0"	16'-0"	#8 Tol 7	8'-4"
	10'-4"	4'-6"	16'-0"	#7 Tol 6	8'-10"	16'-0"	#8 Tol 7	10'-4"
4'-0"	12'-4"	4'-0"	16'-0"	#7 Tol 6	7'-10"	16'-0"	#8 Tol 7	12'-4"
	14'-4"	3'-6"	16'-0"	#7 Tol 6	6'-10"	16'-0"	#8 Tol 7	14'-4"
	16'-4"	3'-3"	16'-0"	#7 Tol 6	6'-2"	16'-0"	#8 Tol 7	16'-4"
	6'-4"	4'-3"	16'-0"	#7 Tol 6	8'-0"	15'-6"	#8 Tol 7	6'-4"
	8'-4"	3'-10"	16'-0"	#7 Tol 6	7'-4"	15'-9"	#8 Tol 7	8'-4"

NOTES:

- For details not shown, see Revised Standard Plan RSP B15-6 and Standard Plan B15-7.
- Lapped splices in spiral reinforcement shall be lapped at least 80 wire diameters. Spiral reinforcement at splices and at ends shall be terminated with a 135° hook with a 6" tall hooked around a longitudinal bar.

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION SOUND WALL MASONRY BLOCK ON TYPE 736S/SV BARRIER DETAILS (3)

NO SCALE

RSP B15-8 DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN B15-8
DATED MAY 1, 2006 - PAGE 298 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP B15-8

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

October 5, 2007
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

Douglas J. Durand
REGISTERED CIVIL ENGINEER
No. C47240
Exp. 12-31-07
CIVIL
STATE OF CALIFORNIA

To accompany plans dated _____

ELECTROLIERS

	STANDARD TYPES		High mast light pole
	15, 15D		Double Arm lighting standard
	15 STRUCTURE		Existing electrolier
	21, 21D STRUCTURE		Electrolier foundation (Future installation)
	30		
	31		
	32		
	35		
	36-20A		

NOTES:

1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
3. Variations noted adjacent to symbol on project plans.

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

AB	Abandon. If applied to conduit, remove conductors.
BC	Install pull box in existing conduit run.
BP	Pedestrian barricade, type as indicated on plan.
CB	Install conduit into existing pull box.
CC	Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
CF	Conduit to remain for future use. Remove conductors. Install pull wire or rope.
DH	Detector handhole.
FA	Foundation to be abandoned.
IS	Install sign on signal mast arm.
NS	No slip base on standard.
PEC	Photoelectric control.
PEU	Photoelectric unit.
RC	Equipment or material to be removed and become the property of the Contractor.
RE	Remove electrolier, fuses and ballast. Tape ends of conductors.
RL	Relocate equipment.
RR	Remove and reuse equipment.
RS	Remove and salvage equipment.
SC	Splice new to existing conductors.
SD	Service disconnect.
SF	Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
TSP	Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	c	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dic	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
N	N	Mercury vapor lighting fixture
NC	NC	Neutral (Grounded Conductor)
NO	NO	Normally closed
PB	pb	Normally open
PEC	pec	Pull box
PED	ped	Photoelectric control (Type I, II, III, IV or I as shown)
PEU	peu	Pedestrian
PPB	ppb	Photoelectric unit
RL	rl	Pedestrian push button
RM	rm	Relocated equipment
SB	sb	Ramp metering
SIC	sic	Slip base
SIG	sig	Signal interconnect cable
SMA	sma	Signal
SNS	sns	Signal mast arm
SP	sp	Street name sign
TDC	tdc	Service point
TMS	tms	Telephone demarcation cabinet
TOS	tos	Traffic monitoring station
VEH	veh	Traffic Operations System
XFMR	xfmr	Vehicle
COMM	comm	Transformer
RWIS	rwis	Communication
		Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
REGISTERED ELECTRICAL ENGINEER					
October 5, 2007					
PLANS APPROVAL DATE					
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					

To accompany plans dated _____

SOFFIT AND WALL MOUNTED LUMINAIRES

- Pendant, 70 W HPS unless otherwise specified.
- Flush, 70 W HPS unless otherwise specified.
- Wall surface, 70 W HPS unless otherwise specified.
- Existing soffit or wall luminaire to remain unmodified.
- Existing soffit or wall luminaire to be modified as specified.

NOTE:

Arrow indicates "street side" of luminaire.

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffery G. McPhee
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
PLANS APPROVAL DATE

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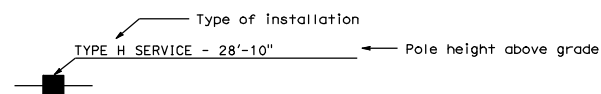
To accompany plans dated _____

CONDUIT**PROPOSED****EXISTING**

---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C---	-c---	Communication conduit
-T---	-t---	Telephone conduit
-F---	-f---	Fire alarm conduit
-FO---	-fo---	Fiber optic conduit
---	---	Conduit termination
○ R	○ r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT**PROPOSED****EXISTING**

---OH---	---oh---	Overhead lines
■ U	■ U	Wood pole "U" indicates utility owned
○	○	Pole guy with anchor
▲	▲	Utility transformer - ground mounted
III	III	Service equipment enclosure type
▲	▲	Service equipment enclosure door indicates front of enclosure
T	T	Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION**ILLUMINATED OVERHEAD SIGN****PROPOSED****EXISTING**

III	III	Overhead sign - Single post
○	○	Overhead sign - Two post
■	■	Overhead sign - Mounted on structure
⊗	⊗	Overhead sign with electroliner

SIGNAL EQUIPMENT**PROPOSED****EXISTING**

□	□	Pedestrian signal face
○	○	Pedestrian push button post
---	---	Pedestrian barricade
▲	▲	Vehicle signal face (with backplate, 3-Section: red, yellow and green)
▲	▲	Vehicle signal face with angle visors
PV	PV	Modifications of basic symbols: "L" indicates all non-arrow sections lowered "Lg" indicates lowered green section only "PV" indicates 12" programmed visibility sections "9" indicates all 8" sections (only when specified)
○	○	Type 15TS and Vehicle signal face
▲	▲	Vehicle signal face with red, yellow and green left arrow sections
▲	▲	Vehicle signal face with red and yellow sections and up green arrow
▲	▲	Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
▲	▲	Type 1 Standard and attached vehicle signal faces
▲	▲	Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
▲	▲	Type 33 Standard, Left-turn vehicle signal face and sign
▲	▲	Standard with luminaire and signal mast arms and attached vehicle signal faces
▲	▲	Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
▲	▲	Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
▲	▲	Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
⊗	⊗	Controller assembly. Door indicates front of cabinet

SIGNAL EQUIPMENT Cont**PROPOSED****EXISTING**

●	○	Guard post
○	○	Type 1 Standard with "Meter On" sign
▲	▲	Emergency Vehicle detector

NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(SYMBOLS AND ABBREVIATIONS)**

NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

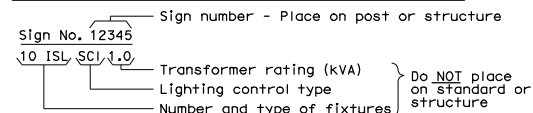
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

October 5, 2007
 PLANS APPROVAL DATE
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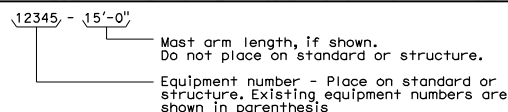
REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

EQUIPMENT IDENTIFICATION

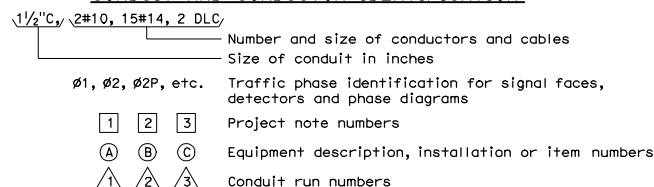
ILLUMINATED SIGN IDENTIFICATION NUMBER:



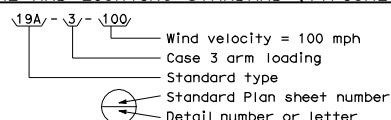
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



CONDUIT AND CONDUCTOR IDENTIFICATION:



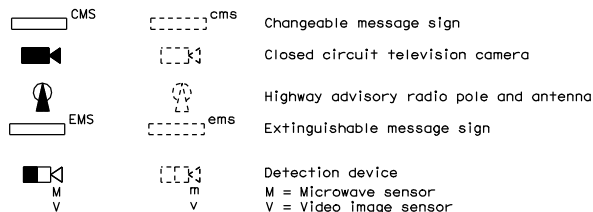
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



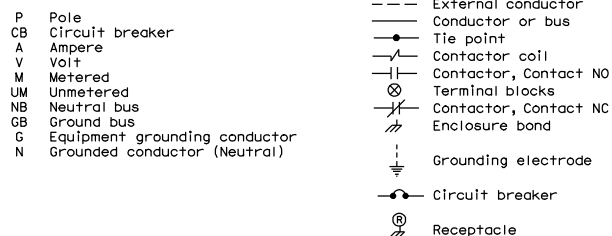
MISCELLANEOUS EQUIPMENT

PROPOSED

EXISTING



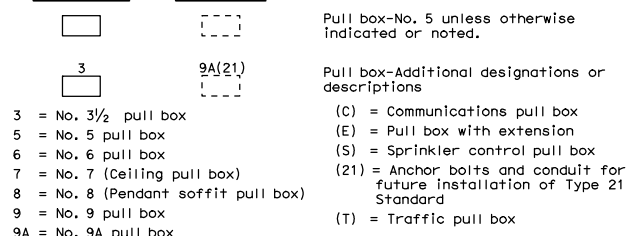
WIRING DIAGRAM LEGEND



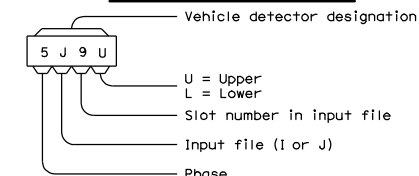
PULL BOXES

PROPOSED

EXISTING

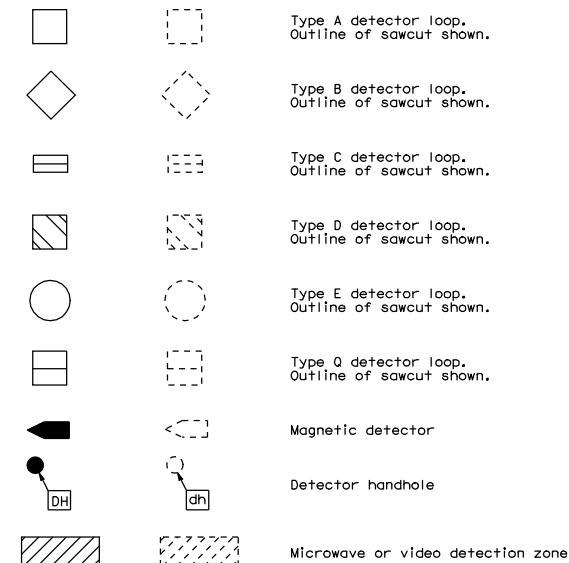


VEHICLE DETECTORS



PROPOSED

EXISTING



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

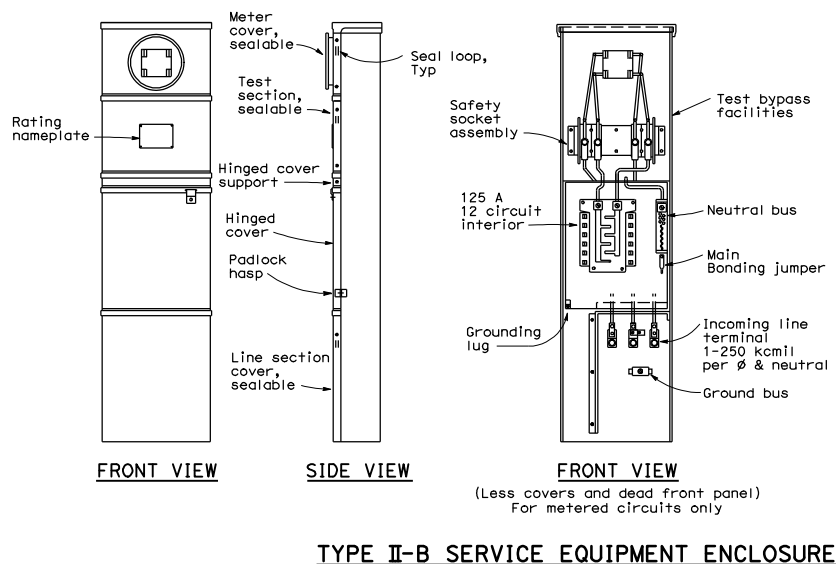
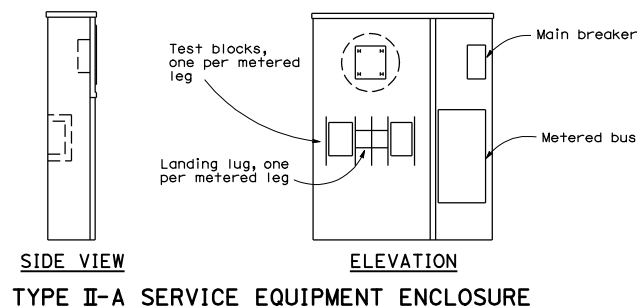
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Jeffery G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated _____



NOTES-TYPE II SERVICE EQUIPMENT ENCLOSURES:

- Service equipment enclosures and metering equipment shall meet the requirements of the service utility.
- Service equipment enclosures shall be factory wired NEMA 3R construction and shall be provided with dead front panel and provisions for padlocking.
- Control wiring shall be 600 V, No. 14 AWG stranded (THHN) machine tool wire. Where subject to flexing, 19 strand wire shall be used.
- Main bus shall be rated for 125 A and shall be tin-plated copper.
 - Adjacent to the breaker or device with character size a minimum of $\frac{1}{8}$ ".
 - At the top of the exterior door panel indicating system number, voltage level and number of phases with character size a minimum of $\frac{3}{16}$ ".
- A plastic laminated wiring diagram shall be provided and attached to the inside of the front door.
- In unpaved areas, a raised portland cement concrete pad of 2'-0" x 4" x 4" width of service equipment enclosure foundation or controller cabinet foundation shall be constructed in front of Type II service equipment enclosure.
- Internal bus, where shown, is typical only. Alternative designs of proposed service equipment enclosure shall be submitted to the Engineer for approval.
- Circuit breakers may be mounted in the vertical or horizontal position.
- Dimensions of service equipment enclosures shall meet the requirements of the service utility.
- Minimum clearance shall be required for front and back of service equipment enclosures per National Electrical Code, Article 110.26, "Spaces About Electrical Equipment (600 Volts, Nominal, or Less)."

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT TYPE II SERIES)

NO SCALE

RSP ES-2B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2B
DATED MAY 1, 2006 - PAGE 404 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2B

2006 REVISED STANDARD PLAN RSP ES-2B

NOTES-TYPE III SERVICE EQUIPMENT ENCLOSURES:

1. Service equipment enclosure and metering equipment shall meet the requirements of the service utility. The meter area shall have a sealable, lockable, weathertight cover that can be removed without the use of tools.
2. Service equipment enclosures shall be factory wired and conform to NEMA standards.
3. Dimensions of service equipment enclosures shall meet the requirements of the service utility.
4. The dead front panels on Type III service equipment enclosures shall have a continuous stainless steel or aluminum piano hinge. The panel in front of the breakers shall be secured with a latch or captive screws. No live parts shall be mounted on the dead front panel.
5. The exterior door shall have provisions for padlocking. The padlock hole shall be a minimum diameter of $\frac{1}{16}$ ".
6. Enclosures housing transformers of more than one kVA shall have effective screened ventilation louver of not less than 50 square inches. Screen shall be stainless steel No. 304, with a No. 10 size mesh. Framed screen shall be secured with at least four bolts.
7. Fasteners on the exterior of the enclosure shall be vandal-resistant and shall not be removable from the exterior. Exterior screws, nuts, bolts and washers shall be stainless steel.
8. Landing lugs for incoming service conductors shall be compatible with either copper or aluminum conductors sized to suit the conductors shown on the plan. Landing lugs shall be copper or tin-plated aluminum. Neutral bus shall be rated for 125 A and be suitable for copper or aluminum conductors unless otherwise specified. The terminal shall include but not be limited to:
 - a) Incoming terminals (landing lugs)
 - b) Neutral lugs
 - c) Solid neutral terminal strip
9. At least 6 standard single pole circuit breaker spaces, $\frac{3}{4}$ " nominal, shall be provided for branch circuits. Circuit breaker interiors shall be copper. Interiors of enclosure shall accept plug-in or cable-in/cable-out circuit breakers.
10. Control wiring shall be 600 V, 14 stranded machine tool wire. Where subject to flexing, 19 strand wire shall be used.
11. Main bus shall be rated for 125 A and shall be tin-plated copper.
12. A plastic laminated wiring diagram shall be provided with brass mounting eyelets and attached to the inside of the enclosure and the wiring diagram shall be affixed to the interior with a UL or ETL approved method.

13. An engraved phenolic nameplate on the dead front panel indicating the function of each circuit or device shall be installed with stainless steel rivets or stainless steel screws:
 - a) Adjacent to the breaker or device with character size a minimum of $\frac{1}{8}$ ".
 - b) At the top of the exterior door panel indicating State system number, voltage level and number of phases with character size a minimum of $\frac{3}{16}$ ".
14. The plan shows the approximate location of devices within the enclosure. Components may be rearranged, however, the "working" clearances within the service equipment enclosure shall be maintained.
15. In unpaved areas a raised portland cement concrete pad 2'-0" x 4" x width of foundation shall be constructed in front of new service equipment enclosure installation. Pad shall be set to elevation of foundation.
16. Foundation shall extend 2" minimum beyond edge of service equipment enclosure.
17. Internal bus, where shown, is typical only. Alternative design of proposed service equipment enclosure shall be submitted to the Engineer for approval.
18. Plug-in circuit breakers may be mounted in the vertical or horizontal position. Cable-in/cable-out circuit breakers shall be mounted in the vertical position.
19. Type III-AF and Type III-BF service equipment enclosures shall have the meter viewing windows located on the front side of the service equipment enclosures.
20. Type III-AR and Type III-BR service equipment enclosures shall be similarly constructed as Type III-AF and Type III-BF respectively, except the meter viewing windows shall be located on the back side of the service equipment enclosures.
21. Minimum clearance shall be required for front and back of service equipment enclosure per National Electrical Code, Article 110.26, "Spaces About Electric Equipment (600 Volts, Nominal, or Less)."

DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey G. McRae
REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

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Jeffrey G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

To accompany plans dated _____

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT NOTES
TYPE III SERIES)**

NO SCALE

RSP ES-2C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2C
DATED MAY 1, 2006 - PAGE 405 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2C

2006 REVISED STANDARD PLAN RSP ES-2C

Corner seams welded and ground smooth

Reading cover, $\frac{3}{8}$ " thick polycarbonate ultraviolet-resistant surface plastic window

Nameplate

Continuous piano hinge

Landing lug

Test bypass facilities

Meter socket

Main bonding jumper

NB

GB

Ground bus secured to service equipment enclosure

(6)

(7)

(8)

(6)

(7)

(8)

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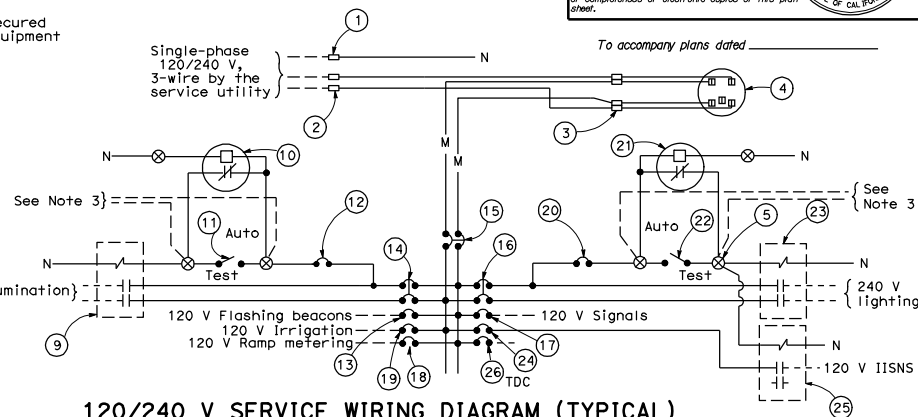
(7)

(8)

(6)

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(8)



120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

TYPE III-A SERVICE (120/240 V) EQUIPMENT LEGEND

ITEM No.	COMPONENT	NAME PLATE DESCRIPTION	ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
(1)	Neutral lug		(14)	30 A, 240 V, 2P, CB	Sign Illumination
(2)	Landing lug (Note 6)		(15)	100 A, 240 V, 2P, CB	Main Breaker
(3)	Test bypass facility		(16)	30 A, 240 V, 2P, CB	Lighting
(4)	Meter socket and support		(17)	50 A, 120 V, 1P, CB	Signals
(5)	Terminal blocks		(18)	30 A, 120 V, 1P, CB	Ramp Metering
(6)	Neutral bus		(19)	20 A, 120 V, 1P, CB	Irrigation
(7)	Ground bus		(20)	15 A, 120 V, 1P, CB	Lighting Control
(8)	Grounding electrode		(21)	Photoelectric unit (Note 7)	
(9)	30 A, 2PNO Contactor	Sign Illumination	(22)	15 A, 1P, Test switch	Lighting Test Switch
(10)	Photoelectric unit (Note 7)		(23)	60 A, 2PNO Contactor	Lighting
(11)	15 A, 1P, Test switch	Sign Illumination Test Switch	(24)	15 A, 120 V, 1P, CB	IISNS
(12)	15 A, 120 V, 1P, CB	Sign Illumination Control	(25)	30 A, 2PNO Contactor	IISNS
(13)	15 A, 120 V, 1P, CB	Flashing Beacon	(26)	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Items No. (1) and (6) shall be isolated from the service equipment enclosure.
5. Meter sockets shall be 5 clip type.
6. The landing lug shall be suitable for multiple conductors.
7. Type I photoelectric control shall be used unless otherwise indicated on the plans.

STATE OF CALIFORNIA
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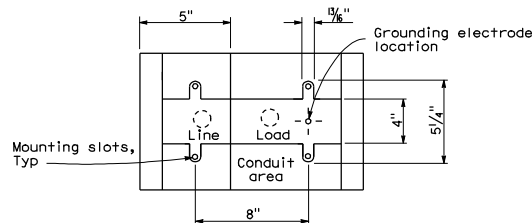
**ELECTRICAL SYSTEMS
(SERVICE EQUIPMENT AND
TYPICAL WIRING DIAGRAM,
TYPE III-A SERIES)**

NO SCALE

RSP ES-2D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2D
DATED MAY 1, 2006 - PAGE 406 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2D

**TYPE III-AF SERVICE
EQUIPMENT ENCLOSURE (TYPICAL)**



**BASE FOR TYPE III-A
SERVICE EQUIPMENT ENCLOSURE**

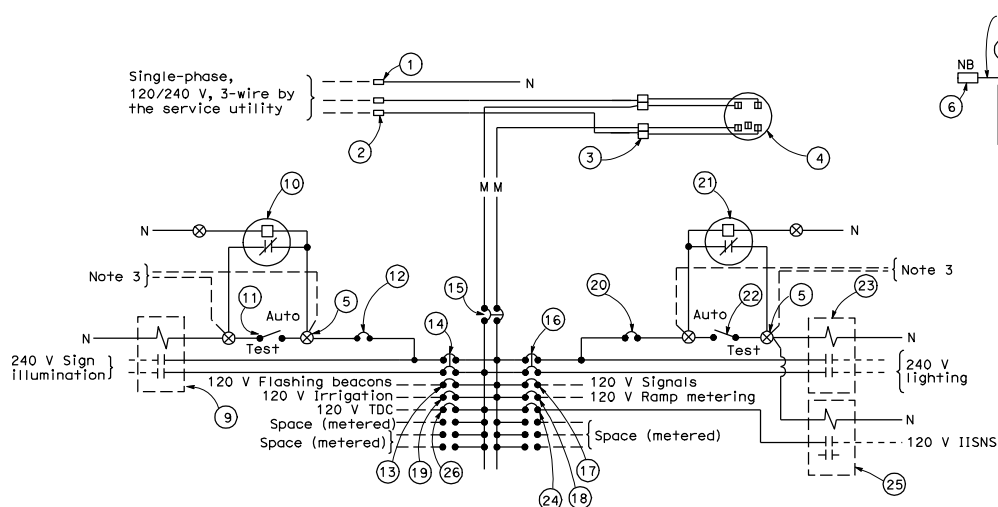
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL SHEETS

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated _____

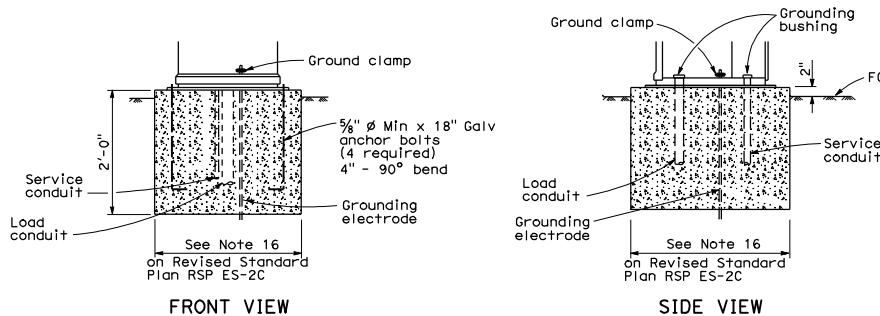


120/240 V SERVICE WIRING DIAGRAM (TYPICAL)

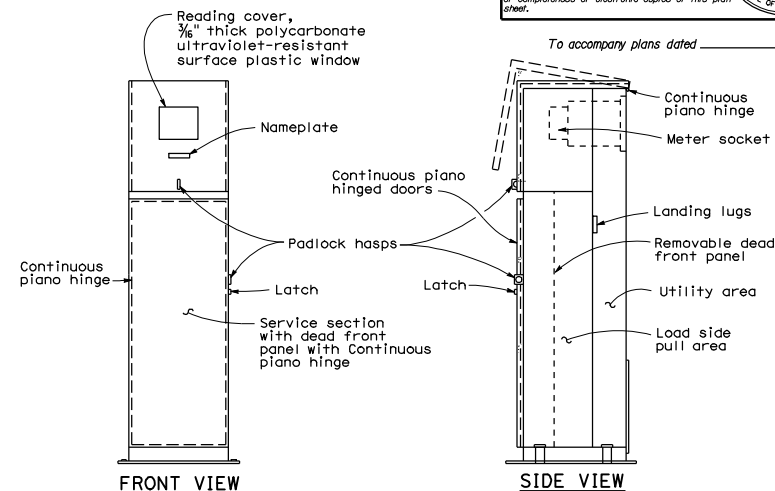
TYPE III-B SERVICE (120/240 V) EQUIPMENT LEGEND

ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
1	Neutral lug	
2	Landing lug (Note 6)	
3	Test bypass facility	
4	Meter socket and support	
5	Terminal blocks	
6	Neutral bus	
7	Ground bus	
8	Grounding electrode	
9	30 A, 2PNO Contactor	Sign Illumination
10	Photoelectric unit (Note 7)	
11	15 A, 1P, Test switch	Sign Illumination Test Switch
12	15 A, 120 V, 1P, CB	Sign Illumination Control
13	15 A, 120 V, 1P, CB	Flashing Beacon
14	30 A, 240 V, 2P, CB	Sign Illumination
15	100 A, 240 V, 2P, CB	Main Breaker
16	30 A, 240 V, 2P, CB	Lighting
17	50 A, 120 V, 1P, CB	Signals
18	30 A, 120 V, 1P, CB	Ramp Metering
19	20 A, 120 V, 1P, CB	Irrigation
20	15 A, 120 V, 1P, CB	Lighting Control
21	Photoelectric unit (Note 7)	
22	15 A, 1P, Test switch	Lighting Test Switch
23	60 A, 2PNO Contactor	Lighting
24	15 A, 120 V, 1P, CB	IISNS
25	30 A, 2PNO Contactor	IISNS
26	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet

**BASE FOR TYPE III-B
SERVICE EQUIPMENT ENCLOSURE**



**TYPE III-B SERVICE EQUIPMENT
ENCLOSURE FOUNDATION DETAILS**



**TYPE III-BF SERVICE EQUIPMENT ENCLOSURE
WITH PROVISIONS FOR ONE 100 A METER (TYPICAL)**

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Items No. 1 and 6 shall be isolated from the service equipment enclosure.
5. Meter sockets shall be 5 clip type.
6. The landing lug shall be suitable for multiple conductors.
7. Type I photoelectric control shall be used unless otherwise indicated on the plans.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SERVICE EQUIPMENT AND
 TYPICAL WIRING DIAGRAM,
 TYPE III-B SERIES)**

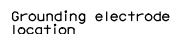
NO SCALE

RSP ES-2E DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2E
 DATED MAY 1, 2006 - PAGE 407 OF THE STANDARD PLANS BOOK DATED MAY 2006.

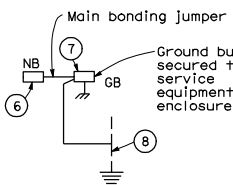
REVISED STANDARD PLAN RSP ES-2E



Continuous piano hinge
dead front panel latch



See Note 16 on
Revised Standard Plan RSP ES-2C



TYPE III-C SERVICE (120/240 V) EQUIPMENT LEGEND

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Items No. ① and ⑥ shall be isolated from the service equipment enclosure.
5. Meter sockets shall be 5 clip type.
6. The landing lug shall be suitable for multiple conductors.
7. Type IV photoelectric control shall be used unless otherwise indicated on the plans.

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NO SCALE

RSP ES-2F DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2F
DATED MAY 1, 2006 - PAGE 408 OF THE STANDARD PLANS BOOK DATED MAY 2006.

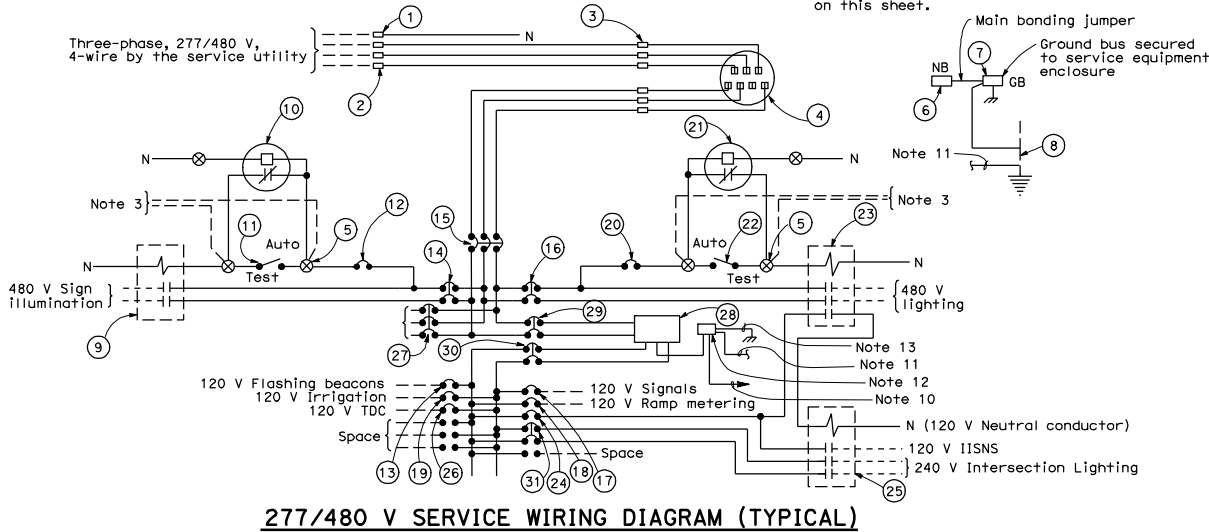
REVISED STANDARD PLAN RSP ES-2F

NOTES: (FOR SERVICE EQUIPMENT ENCLOSURE)

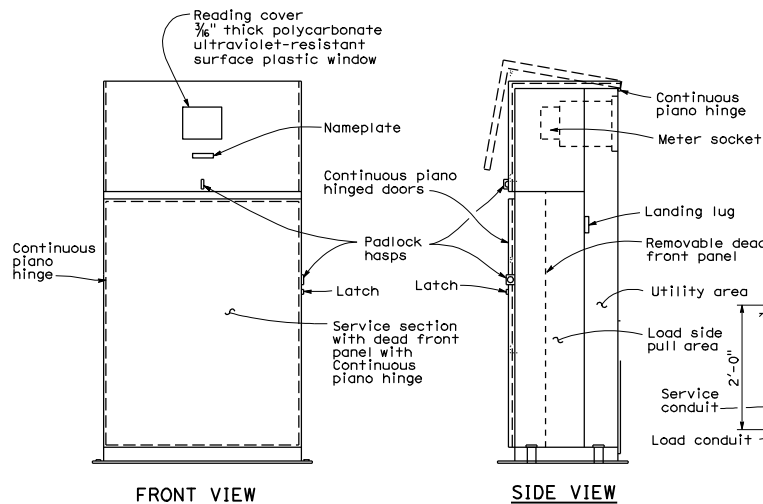
1. Voltage ratings of service equipment shall conform to the service voltages indicated on the plans.
2. Unless otherwise indicated on the plans, service equipment items shall be provided for each service equipment enclosure as shown.
3. Connect to remote test switch mounted on lighting standards, sign post or structure when required.
4. Items No. (1) and (6) shall be isolated from the service equipment enclosure.
5. Meter sockets shall be the 7 clip type.

6. The landing lug shall be suitable for multiple conductors.
7. Type I photoelectric control shall be used unless otherwise indicated on the plans.
8. Service pedestal shall meet the requirements of EUSERC 308 or 309 in addition to the information given on this sheet.

9. Color of insulation of the neutral shall be gray for the 277/480 V system and shall be white for the 120/240 V system.
10. 120/240 V transformer grounded circuit conductor (neutral conductor).
11. 120/240 V transformer grounding electrode conductor.
12. 120/240 V system neutral bus and ground bus.
13. 120/240 V enclosure bonding jumper.



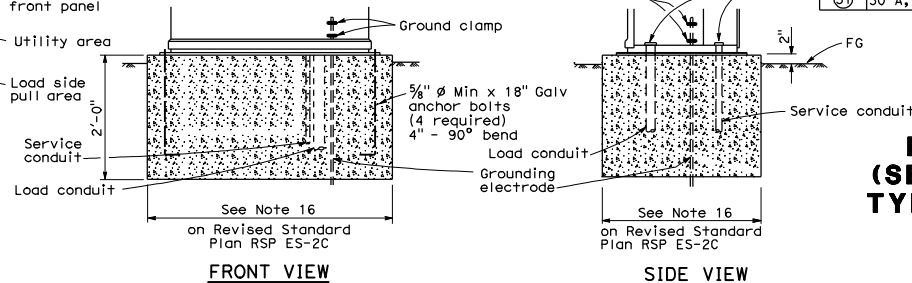
277/480 V SERVICE WIRING DIAGRAM (TYPICAL)



FRONT VIEW

SIDE VIEW

**TYPE III-DF SERVICE EQUIPMENT ENCLOSURE
WITH PROVISIONS FOR ONE 100 A METER (TYPICAL)**



FRONT VIEW

SIDE VIEW

**TYPE III-D SERVICE EQUIPMENT
ENCLOSURE FOUNDATION DETAILS**

DIST	COUNTY	ROUTE	POST MILES	SHEET	TOTAL
				NO.	SHEETS

October 5, 2007
PLANS APPROVAL DATE

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To accompany plans dated _____

TYPE III-D SERVICE (277/480 V) EQUIPMENT LEGEND

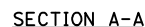
ITEM No.	COMPONENT	NAME PLATE DESCRIPTION
(1)	Neutral lug	
(2)	Landing lug	
(3)	Test bypass facility	
(4)	Meter socket and support	
(5)	Terminal blocks	
(6)	Neutral bus	
(7)	Ground bus	
(8)	Grounding electrode	
(9)	30 A, 2PNO Contactor	Sign Illumination (480 V)
(10)	Photoelectric unit (Note 7)	
(11)	15 A, 1P, Test switch	Sign Illumination Test Switch (277 V)
(12)	15 A, 277 V, 1P, CB	Sign Illumination Control (277 V)
(13)	15 A, 120 V, 1P, CB	Flashing Beacon (120 V)
(14)	15 A, 480 V, 2P, CB	Sign Illumination (480 V)
(15)	100 A, 480 V, 3P, CB	Main Breaker (480 V)
(16)	15 A, 480 V, 2P, CB	Lighting (480 V)
(17)	50 A, 120 V, 1P, CB	Signals (120 V)
(18)	30 A, 120 V, 1P, CB	Ramp Metering (120 V)
(19)	20 A, 120 V, 1P, CB	Irrigation (120 V)
(20)	15 A, 277 V, 1P, CB	Lighting Control (277 V)
(21)	Photoelectric unit (Note 7)	
(22)	15 A, 1P, Test switch	Lighting Test Switch (277 V)
(23)	30 A, 3PNO Contactor	Lighting (480 V)
(24)	15 A, 120 V, 1P, CB	IISNS (120 V)
(25)	30 A, 3PNO Contactor	Intersection Lighting (240 V)
(26)	20 A, 120 V, 1P, CB	Telephone Demarcation Cabinet (120 V)
(27)	20 A, 480 V, 3P, CB	Spare
(28)	10 kVA, 480-120/240 V Transformer	10 kVA, 480-120/240 V, 1Ø
(29)	30 A, 480 V, 2P, CB	Xfmr Primary (480 V)
(30)	60 A, 240 V, 2P, CB	Xfmr Secondary (240 V)
(31)	30 A, 240 V, 2P, CB	Intersection Lighting (240 V)

ELECTRICAL SYSTEMS (SERVICE EQUIPMENT AND TYPICAL WIRING DIAGRAM, TYPE III-D SERIES)

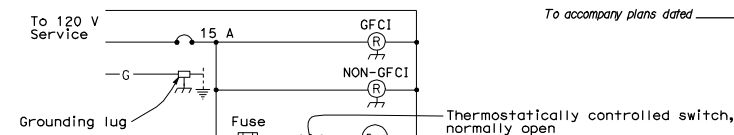
NO SCALE

RSP ES-2G DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-2G
DATED MAY 1, 2006 - PAGE 409 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-2G



FRONT VIEW
(Exterior door removed for clarity)



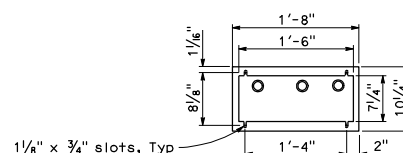
WIRING DIAGRAM

NOTES:

1. Telephone demarcation cabinet shall be furnished with a mounting panel, outlets, circuit breaker and deadfront plates in place. Dimensions are nominal.
2. An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between the bottom of the cabinet and the foundation.
3. In unpaved areas, a raised PCC pad shall be placed in front of the telephone demarcation cabinet. Pad shall be 2'-0" x 1'-10" x 4" thick, with 2" above the finished grade.
4. All conduits shall be bonded to the enclosure.
5. Telephone demarcation cabinet:
 - a) Material shall be anodized aluminum ($\frac{1}{8}$ " thick).
 - b) Fabrication shall conform to the requirements of the Standard Specifications.
 - c) The exterior door shall be side hung and secured with a padlockable draw latch, the padlock hole shall be a minimum diameter of $\frac{3}{16}$ " to receive a padlock.
 - d) Ventilation louvers shall be located on the door.
 - e) Fan shall be mounted in a ventilator housing.
 - f) Fan shall be thermostatically controlled and adjustable to turn on between 80°F and 130°F.
 - g) Fan circuit shall be fused at 175 percent of the fan motor capacity.
 - h) Fan capacity shall be at least 25 cubic feet per minute.
 - i) Fasten fixed mounting panels with nuts, lock and flat washers to $\frac{3}{16}$ " ϕ x 1" studs welded to enclosure.



FRONT VIEW



BASE PLAN

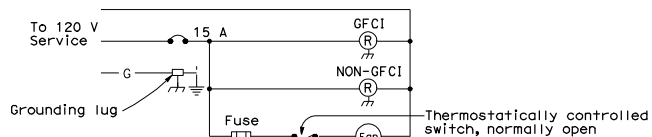
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(TELEPHONE DEMARCATION
CABINET, TYPE B)**

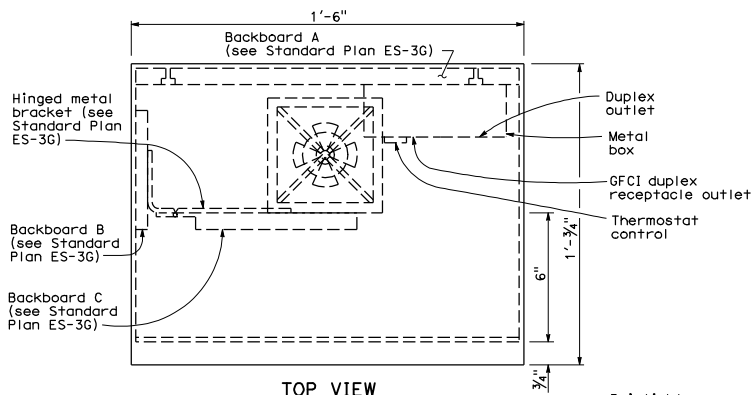
NO SCALE

RSP ES-3E DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-3E
DATED MAY 1, 2006 - PAGE 414 OF THE STANDARD PLANS BOOK DATED MAY 2006.

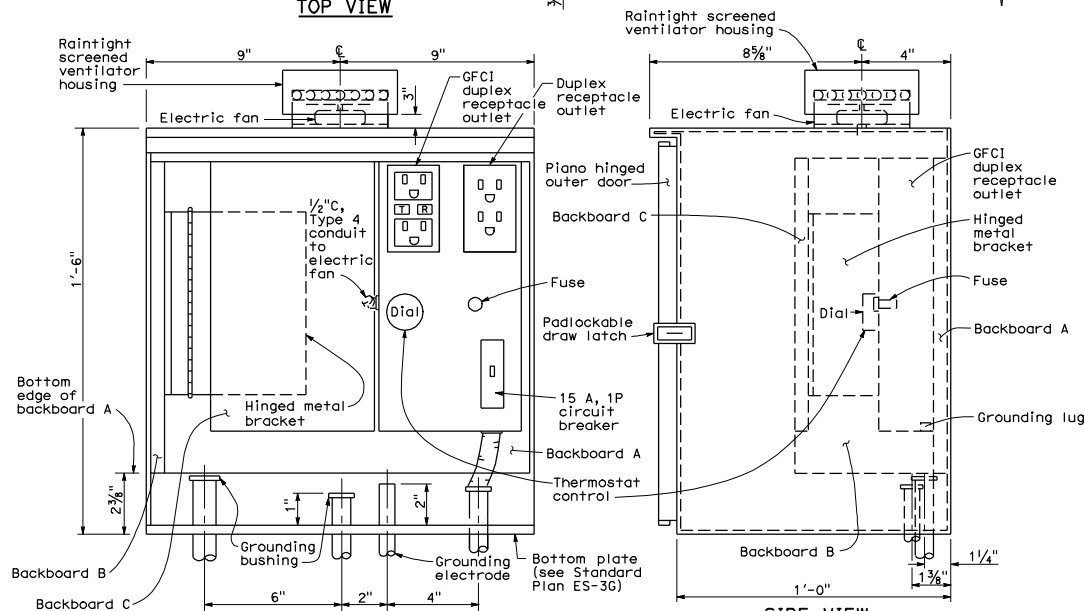
REVISÉD STANDARD PLAN RSP ES-3E



WIRING DIAGRAM



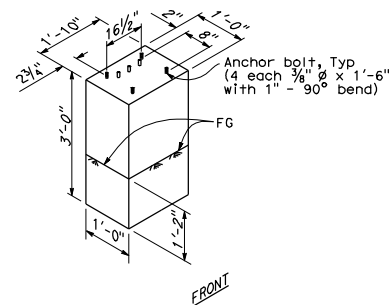
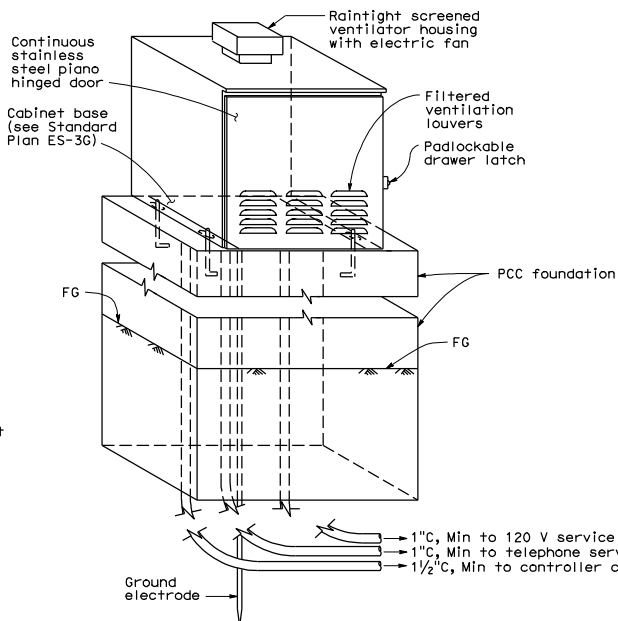
TOP VIEW



FRONT VIEW

(Outer door removed)

SIDE VIEW



FOUNDATION DETAILS

NOTES:

1. Telephone demarcation cabinet shall be furnished with mounting boards, thermostat, fan, outlet box, circuit breaker and outlet plate. Dimensions are nominal.
2. An approved mastic or caulking compound shall be placed on the foundation prior to placing the cabinet to seal openings between bottom of cabinet and foundation.
3. In unpaved areas, a raised PCC pad shall be placed in front of the telephone demarcation cabinet. Pad shall be 1'-10" x 3'-0" x 4" thick, with 2" above the finished grade.
4. All conduits shall be bonded to the enclosure.
5. Telephone demarcation cabinet:
 - a) Material shall be anodized aluminum (1/8" thick).
 - b) Fabrication shall conform to the requirements of the Standard Specifications.
 - c) Ventilation louvers shall be located in door.
 - d) Door shall be lockable with padlock.
 - e) Fan shall be mounted in a ventilator housing.
 - f) Fan capacity shall be at least 25 cubic feet per minute.
 - g) Fan shall be thermostatically controlled and adjustable to turn on between 80°F and 130°F.
 - h) Fan circuit shall be fused at 175 percent of the fan motor capacity.
6. Hardware for fastening of mounting boards:
 - a) Fasten backboard A and backboard B to telephone demarcation cabinet with 3/8" x 3/4" stainless steel carriage bolts (8 required).
 - b) Fasten hinged metal bracket to backboard B and backboard C to hinged metal bracket with number No. 10 x 3/4" wood screws (9 required).

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (TELEPHONE DEMARCATION CABINET, TYPE C)

NO SCALE

RSP ES-3F DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-3F
DATED MAY 1, 2006 - PAGE 415 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-3F

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffery G. McFar
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

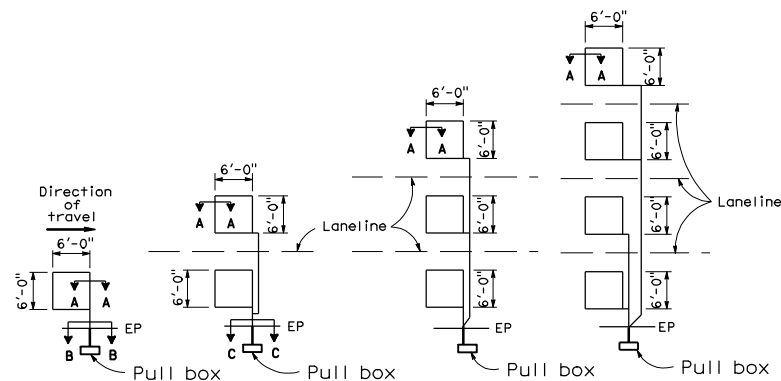
October 5, 2007
PLANS APPROVAL DATE

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To accompany plans dated _____

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a $\frac{3}{16}$ " to $\frac{1}{4}$ " thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

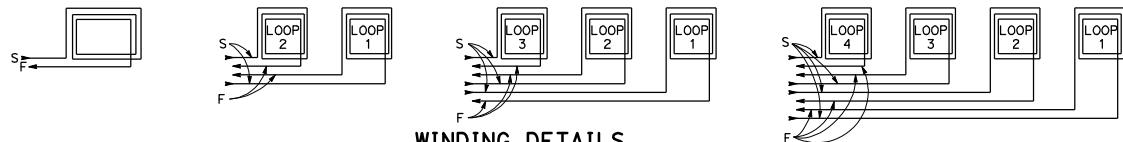


TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION

SAWCUT DETAILS

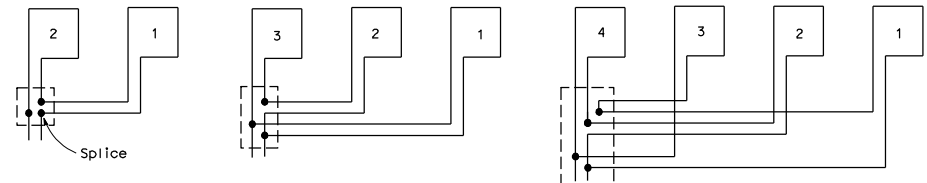
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
 2. 1B thru 4B = 1 Type B loop configuration in each lane.
 3. 1C = 1 Type C loop configuration entering lanes as required.
 4. 1D thru 4D = 1 Type D loop configuration in each lane.
 5. 1E thru 4E = 1 Type E loop configuration in each lane.
 6. 1F thru 4F = 1 Type F loop configuration in each lane.
- (Use Type A, B, C, D, E or F loop detector configurations only when specified or shown on plans)



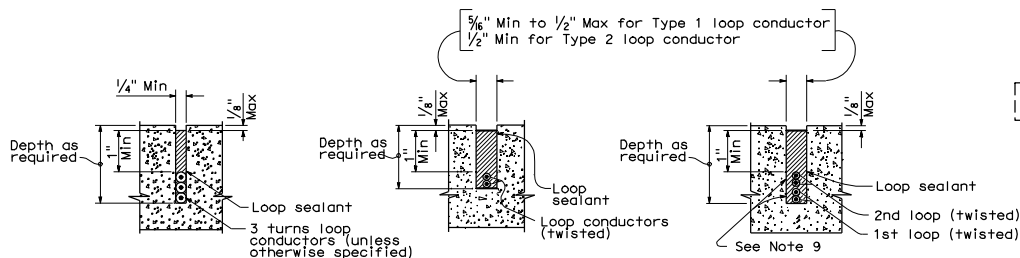
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A

SECTION B-B

SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey S. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
PLANS APPROVAL DATE

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To accompany plans dated _____

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A
DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A

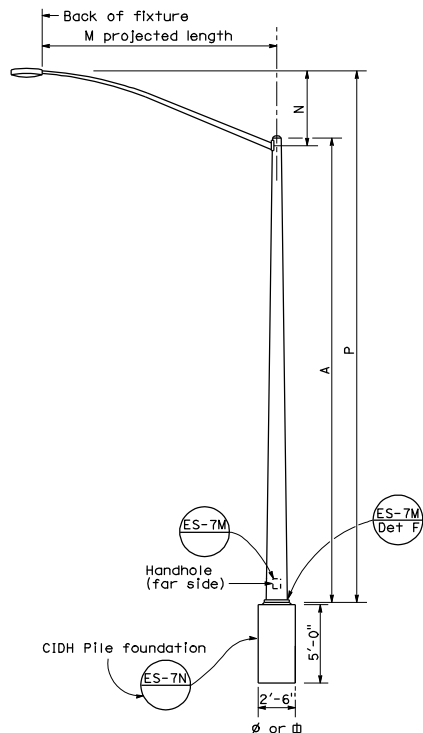
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C67793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

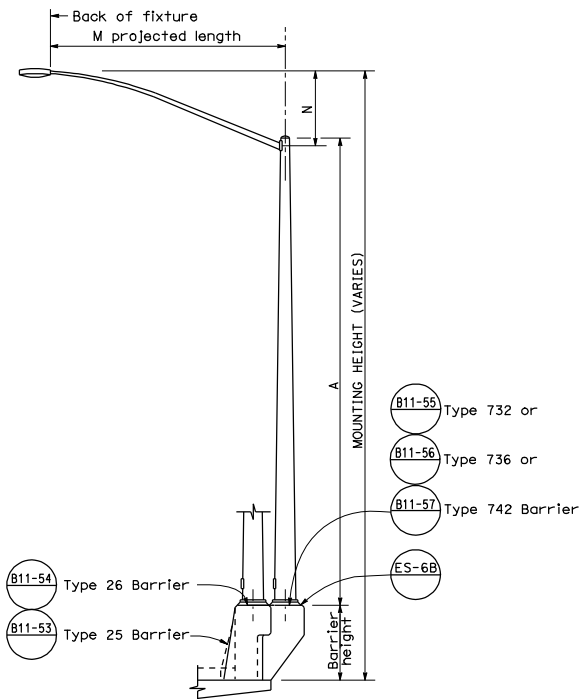
October 5, 2007
PLANS APPROVAL DATE

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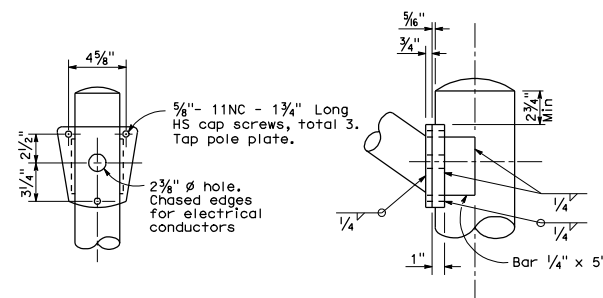
To accompany plans dated _____



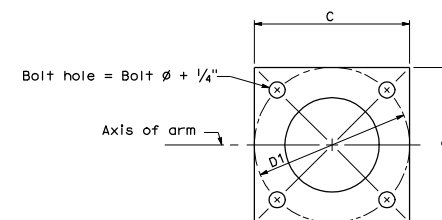
ELEVATION
TYPE 15 AND TYPE 21



ELEVATION
TYPE 15 AND TYPE 21 BARRIER RAIL MOUNTED



DETAIL R
LUMINAIRE ARM CONNECTION



BASE PLATE

POLE TYPE	POLE DATA				BASE PLATE DATA				LUMINAIRE ARM
	A Height	Base	Min OD	Wall Thickness	C	D1 Bolt Circle	Thickness	Anchor Bolts Size	
15	30'	8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1" ϕ x 3'-0" x 4"*	6' - 15' [12"]
21	35'	8 5/8"	3 7/8"	0.1196"	1'-0"	1'-0"	1"	1 1/4" ϕ x 3'-0" x 4"*	6' - 15' [12"]

* For barrier rail bolts, see Standard Plan ES-6B.

LUMINAIRE ARM DATA					
M Projected Length	N Rise	Min OD At Pole	Nominal Thickness	Type 15	Type 21
6'-0"	2'-0"±	3 3/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"	0.1196"	32'-0"±	37'-0"±
10'-0"	3'-3"±	3 1/2"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±	3 1/2"	0.1196"	33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"	0.1196"	34'-3"±	39'-3"±

NOTES:

1. ☐ Indicates arm length to be used unless otherwise noted on the plans.
2. For Type 15-SB, use Type 15 standard with Type 30 slip base plate details, see Standard Plan ES-6F.
3. For additional notes, see Standard Plan ES-7M and ES-7N.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
(LIGHTING STANDARD
TYPES 15 AND 21)**
NO SCALE

RSP ES-6A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-6A
DATED MAY 1, 2006 - PAGE 427 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-6A

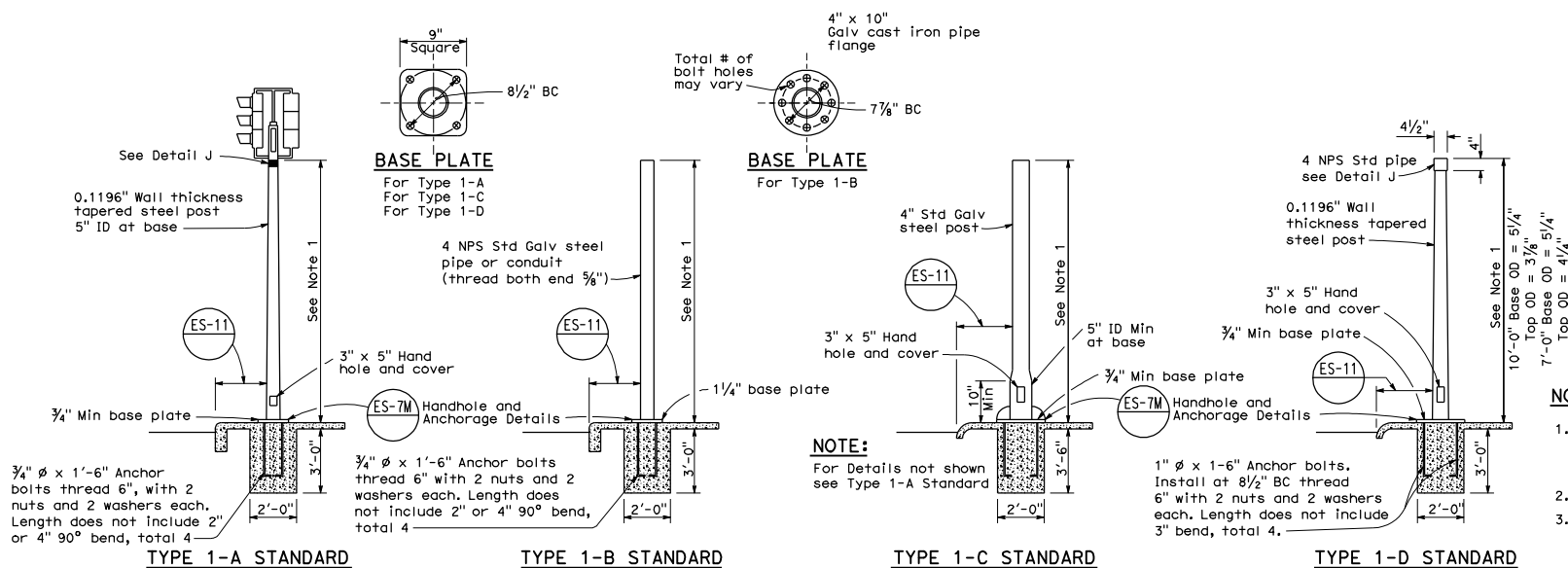
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Stanley P. Johnson
 REGISTERED CIVIL ENGINEER
 No. C67793
 Exp. 3-31-08
 CIVIL
 STATE OF CALIFORNIA

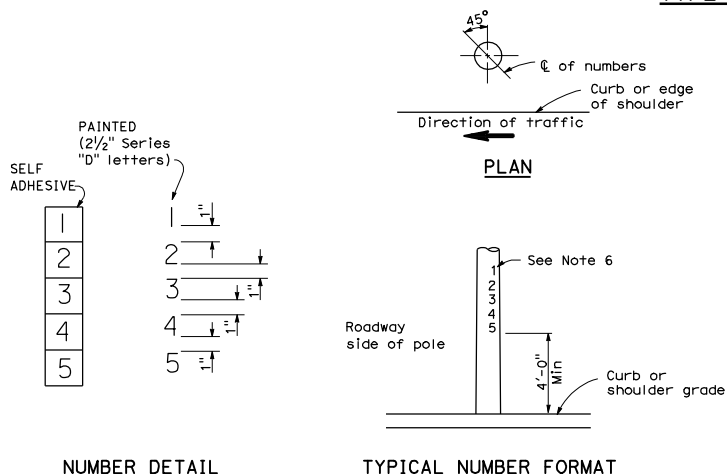
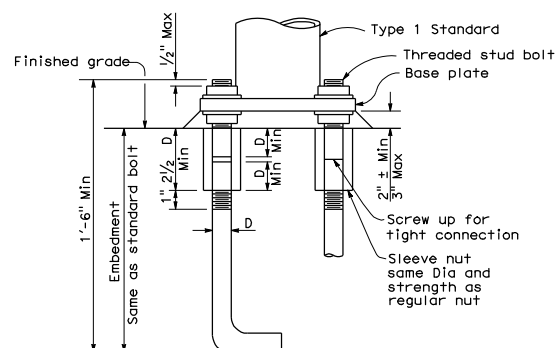
October 5, 2007
PLANS APPROVAL DATE

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To accompany plans dated _____

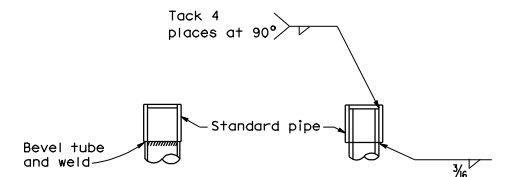
**NOTES:**

- Standards shall be 10'-0" \pm 2" for vehicle signals and 7'-0" \pm 2" for pedestrian signals unless otherwise noted on plans.
- Top of standards shall be 4 1/2" OD.
- Conduits shall extend 2" maximum above finished surface of foundation and for Types 1-A, 1-C and 1-D shall be sloped toward handhole.
- Anchor bolts shall be bonded to conduit or grounding conductor.
- Conduit between standard and adjacent pull box shall be 2" minimum.
- Paint numbers on roadway side facing traffic when electroliner or post is left of direction of traffic.

TYPE 1 SIGNAL STANDARDS**LOCATION OF EQUIPMENT NUMBERS
ON STANDARDS AND POSTS**

Sleeve nuts to be used only when shown or specified on Project Plans

D = Diameter of anchor bolt



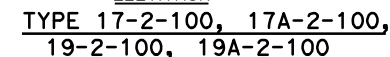
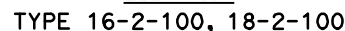
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND
LIGHTING STANDARD
TYPE 1 STANDARD AND
EQUIPMENT NUMBERING)**

NO SCALE

RSP ES-7B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7B
DATED MAY 1, 2006 - PAGE 438 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-7B



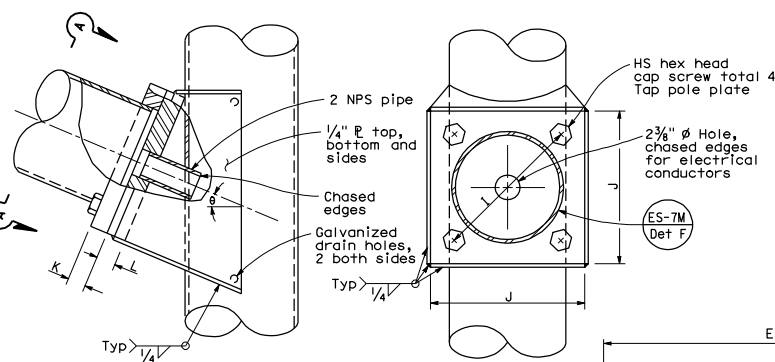
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 2 ARM LOADING
WIND VELOCITY=100 MPH
ARM LENGTHS 15' TO 30')**

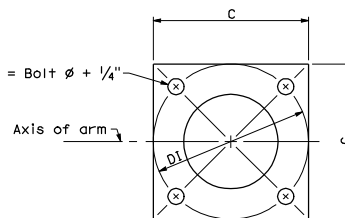
REVISED STANDARD PLAN RSP ES-7D

☐ Indicates arm length to be used unless otherwise noted on plans.

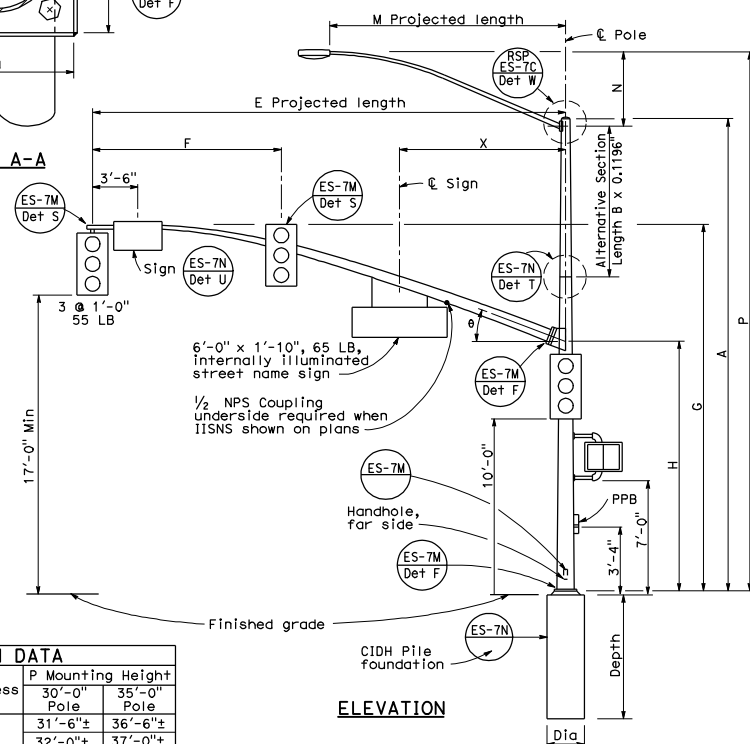
REVISED STANDARD PLAN RSP ES-7D



ELEVATION VIEW
SIGNAL ARM CONNECTION DETAILS



BASE PLATE

ELEVATION

TYPE 19-4-100, 19A-4-100,
24-4-100, 24A-4-100,
26-4-100, 26A-4-100

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 4 ARM LOADING
WIND VELOCITY=100 MPH
ARM LENGTHS 25' TO 45')

RSP ES-7F DATED OCTOBER 5, 2007 SUPERCEDES RSP ES-7F DATED
NOVEMBER 17, 2006 AND STANDARD PLAN ES-7F DATED MAY 1, 2006 -
PAGE 442 OF THE STANDARD PLANS BOOK DATED MAY 2006.

RSP ES-7F DATED OCTOBER 5, 2007 SUPERCEDES RSP ES-7F DATED
NOVEMBER 17, 2006 AND STANDARD PLAN ES-7F DATED MAY 1, 2006 -
PAGE 442 OF THE STANDARD PLANS BOOK DATED MAY 2006.

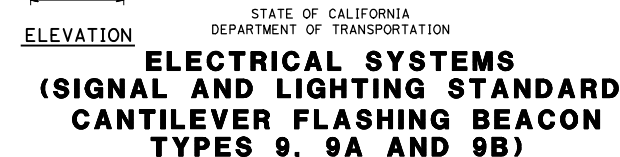
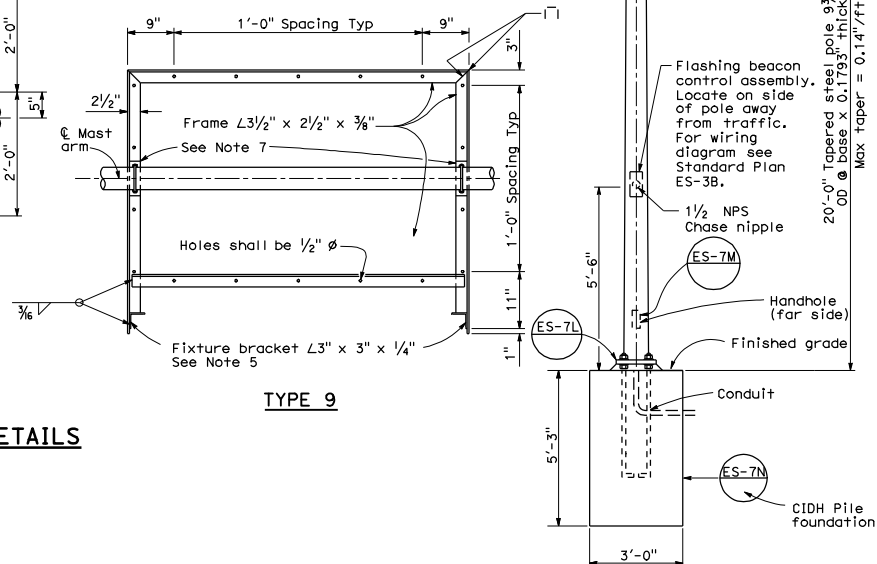
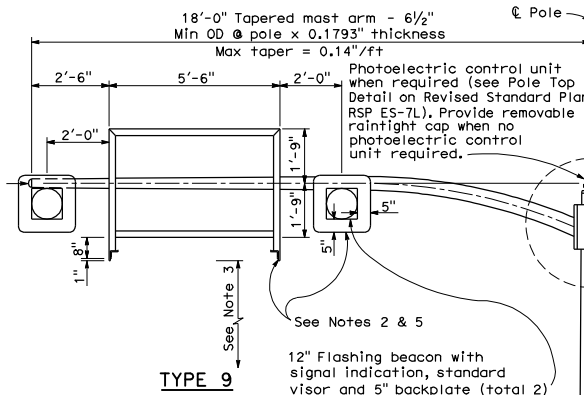
REVISED STANDARD PLAN RSP ES-7F

SIGNAL ARM DATA													
E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS. Cap Screws	J Plate Size	K Arm P Thickness	L Pole P Thickness	θ	X Max	
25'-0"	10'-0"	22'-8"±	16'-0"	7 ⁷ / ₈ "	0.2391"	12"	1/4"-7NC-3"	1'-0"	1/4"	1 1/2"	23°	10'-6"	
30'-0"	12'-0"	8"		1'-0"				1/4"	1 1/2"				
35'-0"	14'-0"	23'-0"±		8 1/2"		1'-1 1/2"		1 1/2"	1 3/4"	21°			
40'-0"	15'-0"	9 3/4"		15°									13'-0"
45'-0"		23'-8"±											

LUMINAIRE ARM DATA				
M Projected Length	N Rise	M in OD at Pole	Thickness	P Mounting Height 30'-0" Pole 35'-0" Pole
6'-0"	2'-0"	3/4"	0.1196"	31'-6"
8'-0"	2'-6"	3/2"		36'-6"
10'-0"	3'-3"	3/8"		37'-0"
12'-0"	4'-3"	4/4"		38'-9"
15'-0"	4'-9"			39'-3"

Pole Type	Load Case	Wind Velocity mph	POLE DATA						BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION		
			A Height	Min OD		Thickness	Alternative Section		C	DI Bolt Circle	Thickness	Anchor Bolts Size			Dia	Depth	Reinforce
				Base	Top		B Length	Bottom									
18-4-100	4	100	17'-0"		9"	0.2391"	None		1'-6"	1'-6"	1 1/2"	2" ø x 42" x 6"	None	25'-0", 30'-0"	3'-0"	9'-0"	Yes
19-4-100				8"	10'-0"			8"									
19A-4-100				7 7/8"	15'-0"		9 3/8"	7 7/8"									
23-4-100				9"	None												
24-4-100				8"	10'-0"			8"									
24A-4-100				7 7/8"	15'-0"	9 3/8"	7 7/8"										
26-4-100				8"	10'-0"		8"										
26A-4-100				7 7/8"	15'-0"	9 3/4"	7 7/8"										
27-4-100				9 3/4"	None												
					12"		0.2391"										
			12 1/2"		0.3125"								6'-15" 15'-0"	40'-0", 45'-0"			

☐ Indicates arm length to be used unless otherwise noted on plans.

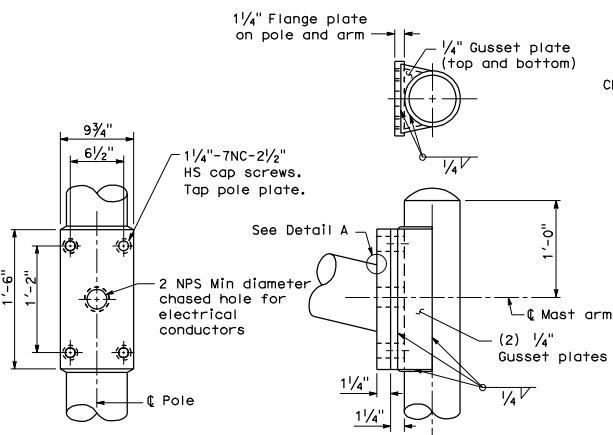


ELECTRICAL SYSTEMS (SIGNAL AND LIGHTING STANDARD CANTILEVER FLASHING BEACON TYPES 9, 9A AND 9B)

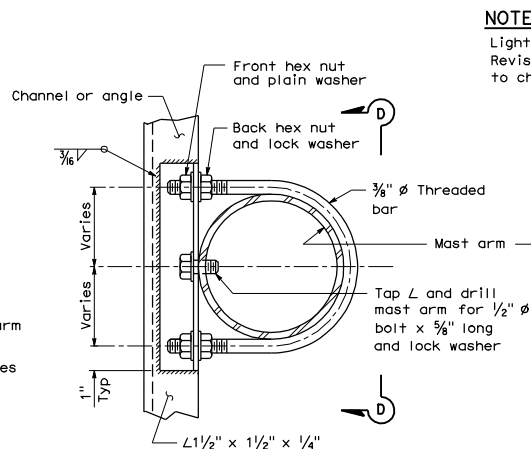
NO SCALE
RSP ES-7K DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7K
DATED MAY 1, 2006 - PAGE 447 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-7K

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
<p>Stanley P. Johnson REGISTERED CIVIL ENGINEER No. C67983 Exp. 3-31-08 CIVIL STATE OF CALIFORNIA</p>					
<p>October 5, 2007 PLANS APPROVAL DATE</p>					
<p>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</p>					
<p>To accompany plans dated _____</p>					

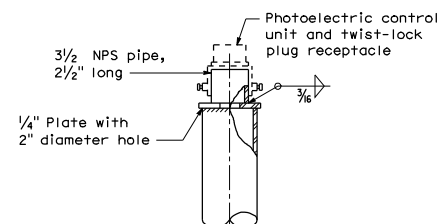
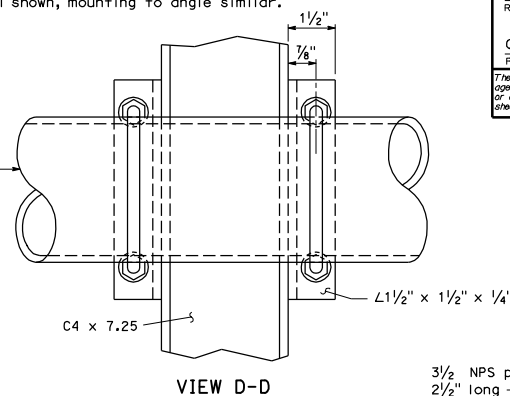


MAST ARM CONNECTION DETAILS

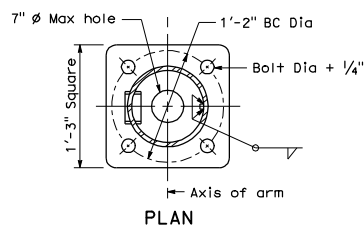


NOTE:
Tighten front hex nuts first,
then tighten back hex nuts.

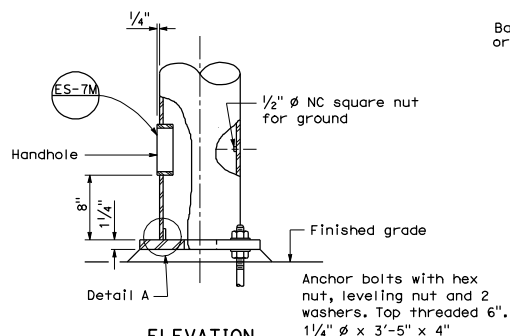
SIGN FRAME MOUNTING DETAILS
All types



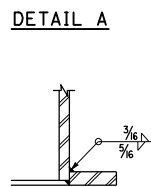
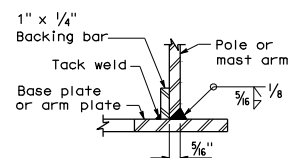
POLE TOP DETAIL



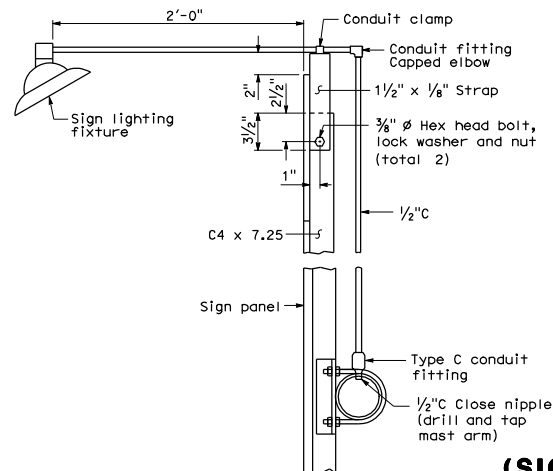
PLAN



ELEVATION
BASE PLATE AND
ANCHORAGE DETAILS

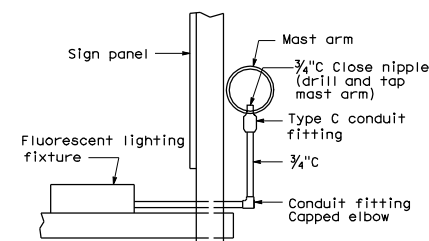


DETAIL A
ALTERNATIVE
DETAIL A
For pole-base plate only.



SIGN LIGHTING FIXTURE
TYPES 9A AND 9B

See Note 4 on Revised Standard Plan RSP ES-7K.



SIGN LIGHTING FIXTURE
TYPE 9 FRAME

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

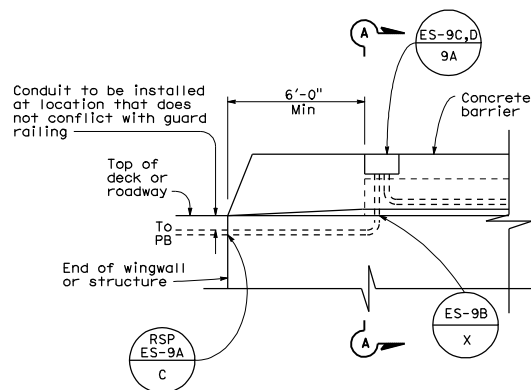
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CANTILEVER FLASHING BEACON
TYPES 9, 9A AND 9B)
NO SCALE

RSP ES-7L DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-7L
DATED MAY 1, 2006 - PAGE 448 OF THE STANDARD PLANS BOOK DATED MAY 2006.

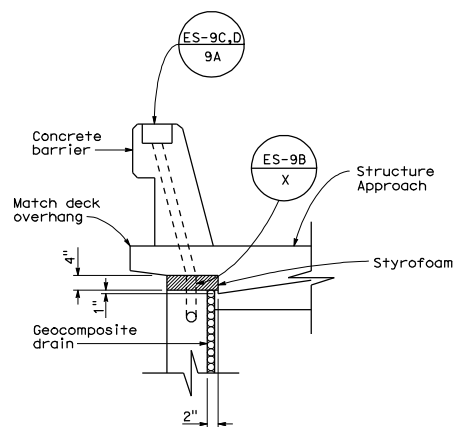
REVISED STANDARD PLAN RSP ES-7L

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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 To accompany plans dated _____
 No. E14512
 Exp. 6-30-08
 JEFFREY G. MCRAC
 ELECTRICAL
 STATE OF CALIFORNIA

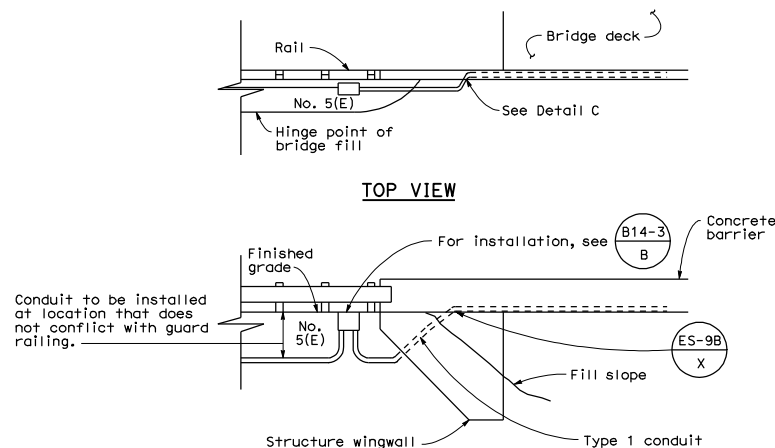


SIDEVIEW



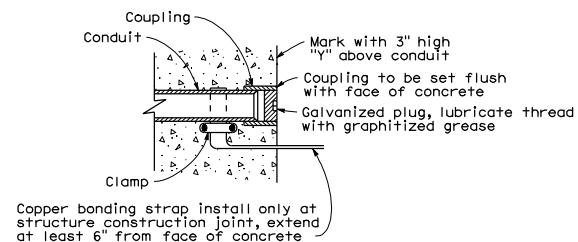
SECTION A-A

**DETAIL A
CONDUIT TERMINATION**



TOP VIEW

**SIDE VIEW
DETAIL I
CONDUIT TERMINATION**



**DETAIL C
CONDUIT TERMINATION**

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (ELECTRICAL DETAILS
 STRUCTURE INSTALLATIONS)**

NO SCALE

RSP ES-9A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9A
 DATED MAY 1, 2006 - PAGE 454 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-9A

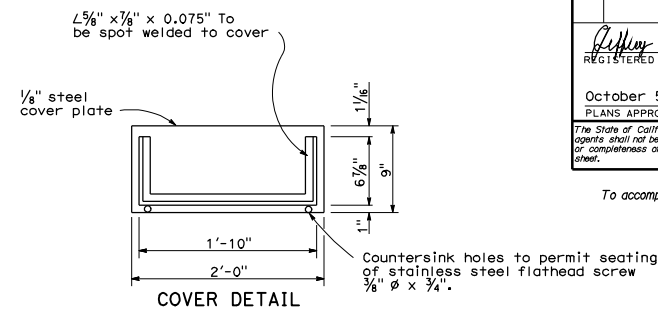
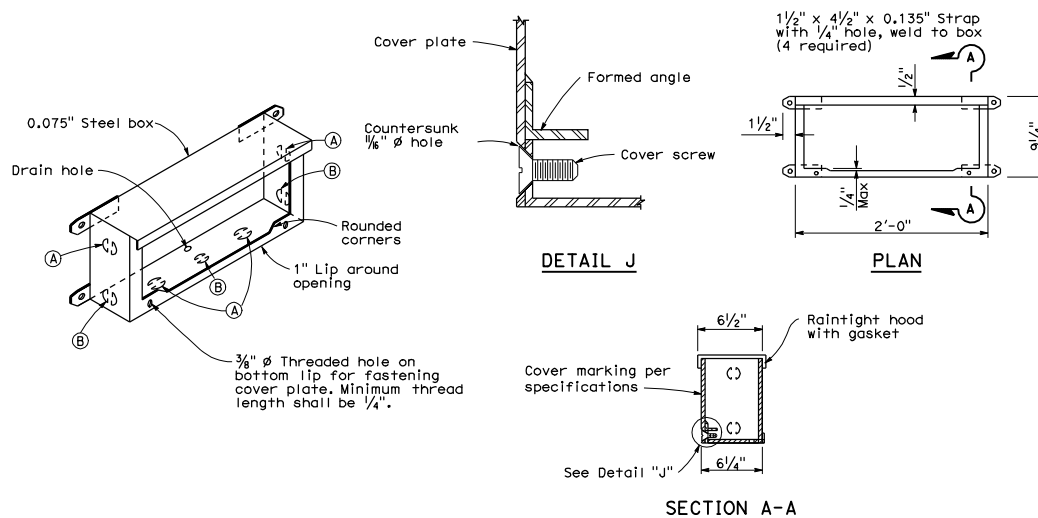
2006 REVISED STANDARD PLAN RSP ES-9A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey S. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

October 5, 2007
 PLANS APPROVAL DATE
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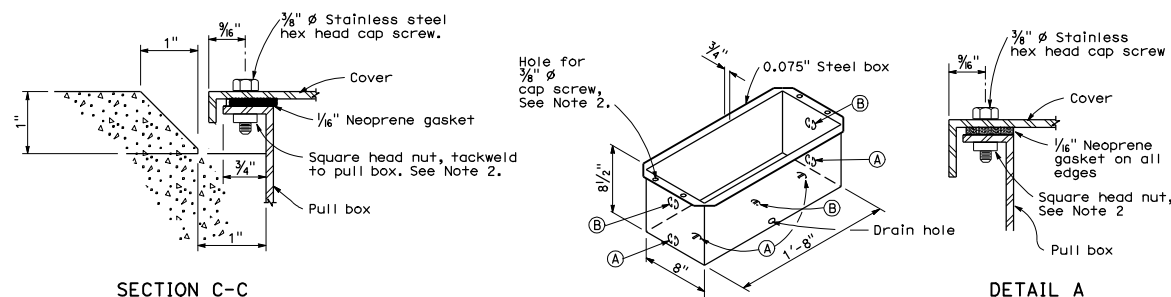
To accompany plans dated _____



INSTALLATION NOTE:

Box shall be parallel to top of railing. Close cover box during pouring with 1/4" plywood of sufficient size to provide 1:1 chamfer on 3 sides of cover. Upper edge of plywood shall fit against lower edge of rain-tight hood.

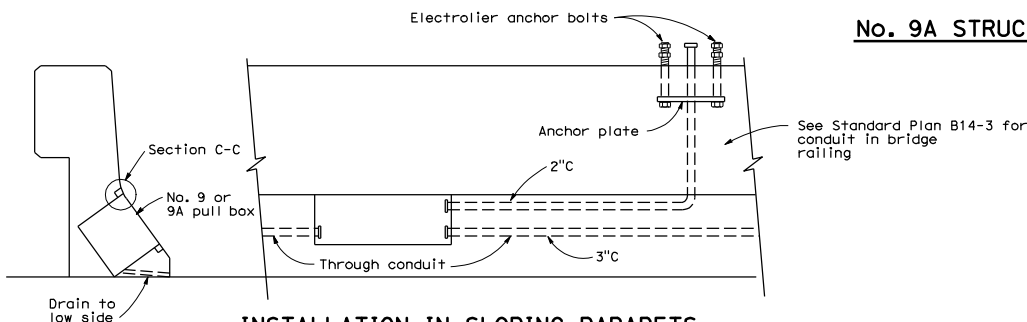
No. 9 STRUCTURE PULL BOX



NOTES: No. 9 and 9A Pull Box

- Corner joints shall be lapped and secured by spot welding or riveting.
- Where cap screws are used to attach cover to box, either of the following methods of providing adequate threading may be used:
 - Tack weld square nut to bottom of flange (Total 4), or
 - Tack weld a 1/4" x 5/8" x 8" bar beneath flange (Total 2).
- Pound knockouts flat after punching.
- Multiple size knockouts shall not be permitted.
- Pull box covers shall be marked as shown on Standard Plan ES-8.

No. 9A STRUCTURE PULL BOX



INSTALLATION IN SLOPING PARAPETS

For reinforcement in area of electrolier, see railing sheets. For electrolier anchor bolts, see Standard Plan ES-6B.

KNOCKOUT SCHEDULE No. 9 AND 9A PULL BOX

- (A) 2"C, 1 each end, 2 on bottom.
(B) 3"C, 1 each end, 1 on bottom.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (ELECTRICAL DETAILS STRUCTURE INSTALLATIONS)

NO SCALE

RSP ES-9C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-9C
DATED MAY 1, 2006 - PAGE 456 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-9C

2006 REVISED STANDARD PLAN RSP ES-9C

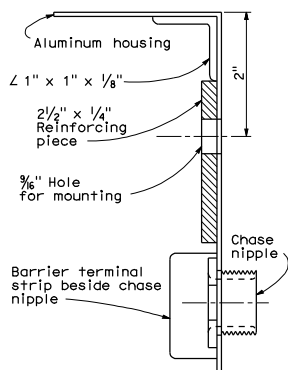
DIST.	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey C. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

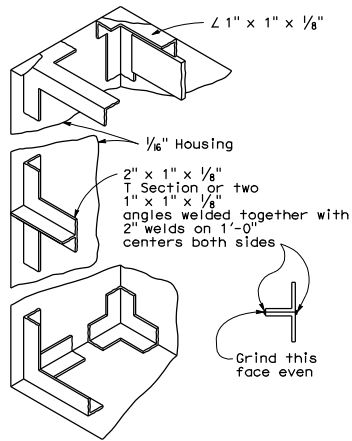
October 5, 2007
 PLANS APPROVAL DATE

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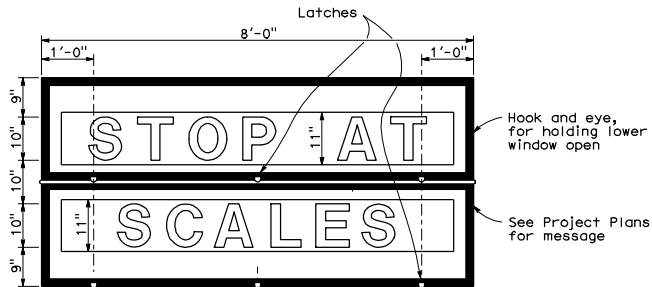
To accompany plans dated _____



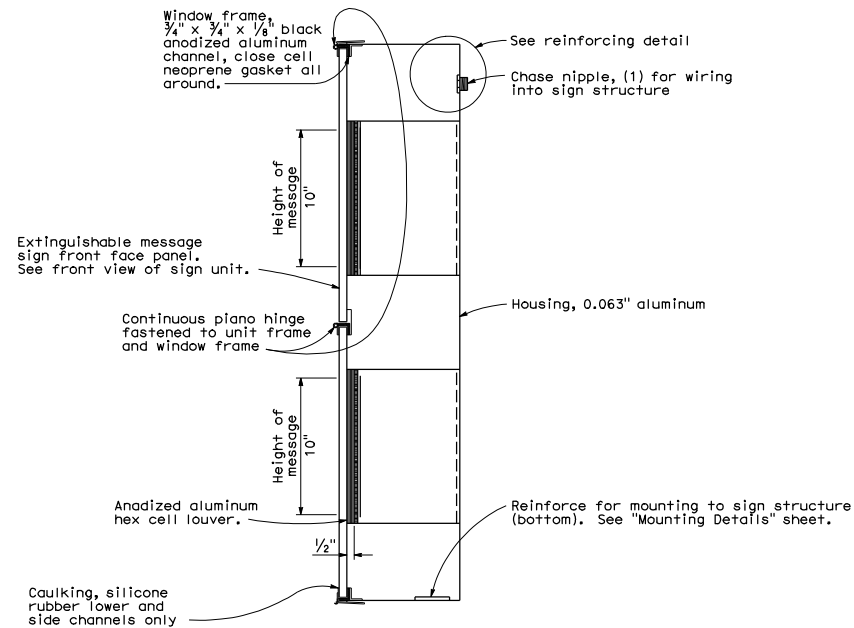
REINFORCING DETAIL



FRAMING DETAILS



FRONT VIEW OF SIGN



CROSS-SECTION OF SIGN

Note:
 See Wiring Notes and Symbols on Revised Standard Plan RSP ES-14B.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LED EXTINGUISHABLE MESSAGE SIGN
 10" LETTERS)**

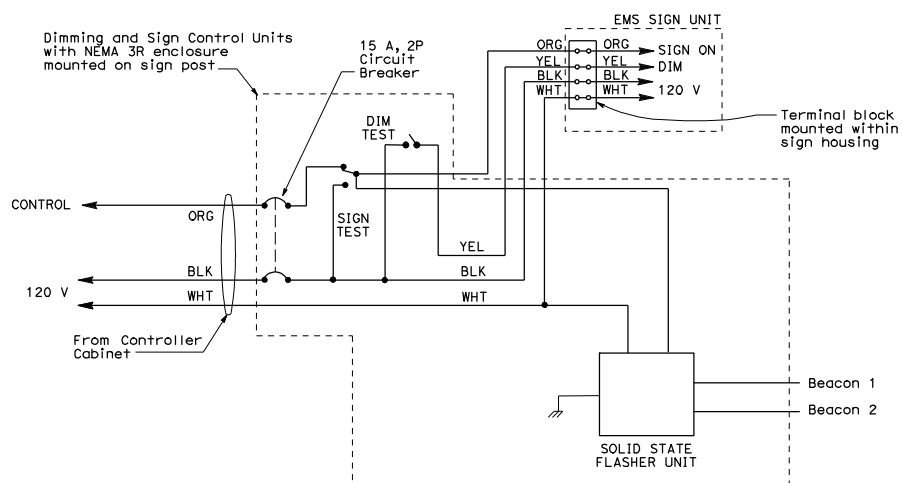
NO SCALE

RSP ES-14A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-14A
 DATED MAY 1, 2006 - PAGE 466 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-14A

2006 REVISED STANDARD PLAN RSP ES-14A

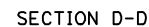
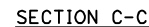
2006 REVISED STANDARD PLAN RSP ES-14B



ELECTRICAL SYSTEMS (LED EXTINGUISHABLE MESSAGE SIGN WIRING DIAGRAM)

RSP ES-14B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-14B
DATED MAY 1, 2006 - PAGE 467 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISÉD STANDARD PLAN RSP ES-14B



2
L2" x 2" x 1/4" not shown for clarity

NOTES:

1. For general details, base plates, anchor bolts and foundations refer to Lightweight Signs, Post Details and Foundation Details sheets of the Standard Plans.
2. For details of special 90° elbow, see Standard Plans ES-4D.
3. For sign structure dimensions, see Project Plans.
4. Pole plate shall be bronze, aluminum or ductile iron as specified in the Standard Specifications.
5. For Bolt-Access Hole Details, see Overhead Signs-Truss Frame Junction Details.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (EXTINGUISHABLE MESSAGE SIGN AND FLASHING BEACONS)

NO SCALE

RSP ES-14C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-14C
DATED MAY 1, 2006 - PAGE 468 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-14C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Jeffrey S. McPhee
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-08
 STATE OF CALIFORNIA

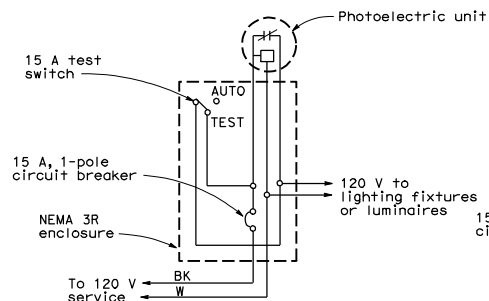
October 5, 2007
 PLANS APPROVAL DATE

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To accompany plans dated _____

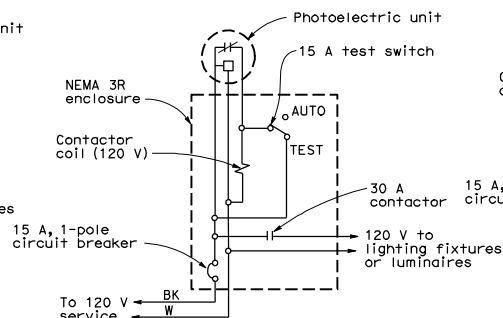
NOTES: (FOR LIGHTING AND SIGN ILLUMINATION CONTROL)

1. The ballast voltages of lighting fixtures and luminaires shall match line service voltages.
2. Voltage rating of photoelectric controls shall conform to the service voltage indicated on the plans.
3. Terminal strip shall be provided for wiring to fixtures.
4. Type SC1A, SC2A, SC3A controls are similar to Types SC1, SC2 and SC3 controls respectively except test switch and wiring are not required.



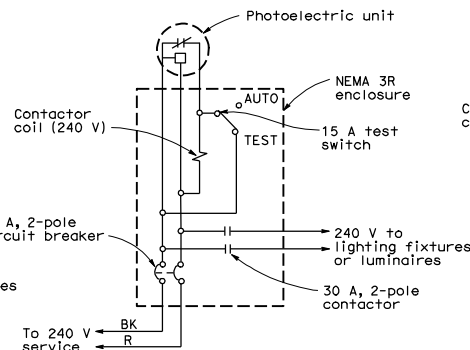
TYPE LC1 CONTROL

For 120 V unswitched circuit with no more than 800 W load.



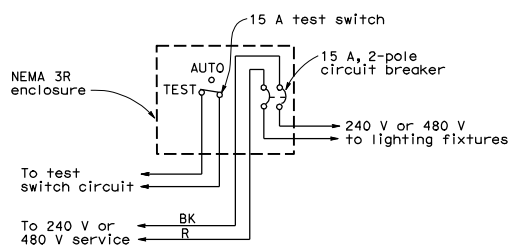
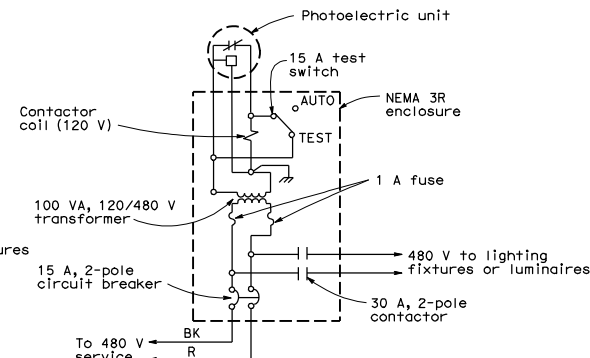
TYPE LC2 CONTROL

For 120 V unswitched circuit



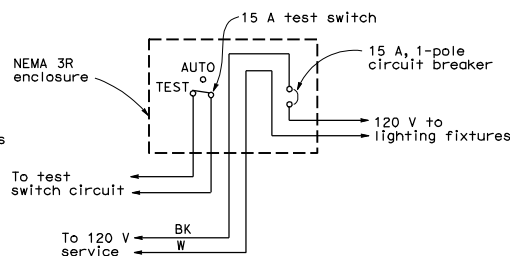
TYPE LC3 CONTROL

For 240 V and 480 V unswitched circuits



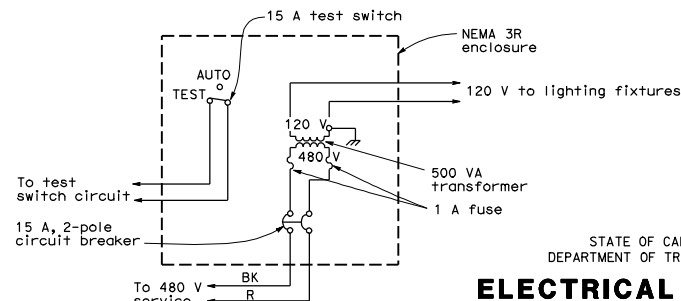
TYPE SC1 CONTROL

For 240 V or 480 V switched circuit, see Note 4 for Type SC1A



TYPE SC2 CONTROL

For 120 V switched circuit, see Note 4 for Type SC2A



TYPE SC3 CONTROL

For 480 V switched sign circuit, see Note 4 for Type SC3A

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (LIGHTING AND SIGN
 ILLUMINATION CONTROL)**

NO SCALE

RSP ES-15D DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-15D
 DATED MAY 1, 2006 - PAGE 472 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-15D

2006 REVISED STANDARD PLAN RSP ES-15D